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ABSTRACT

Following an introduction which discusses the history and geography of Japan, this book focuses on topics related to this country's government, economy, social conditions, and cultural life. Topics related to government include: constitution and emperor; legislature; executive power; judiciary system; foreign relations; and defense. Topics related to economy include: postwar development; present status; natural resources; industry; foreign trade; transport; and finance. Topics related to social conditions include: population; labor relations; family life; social security; medical services; housing; and environmental protection. Topics related to cultural life include: education; science; information media; literature; art; music; theater; religion; and sports. (JN)

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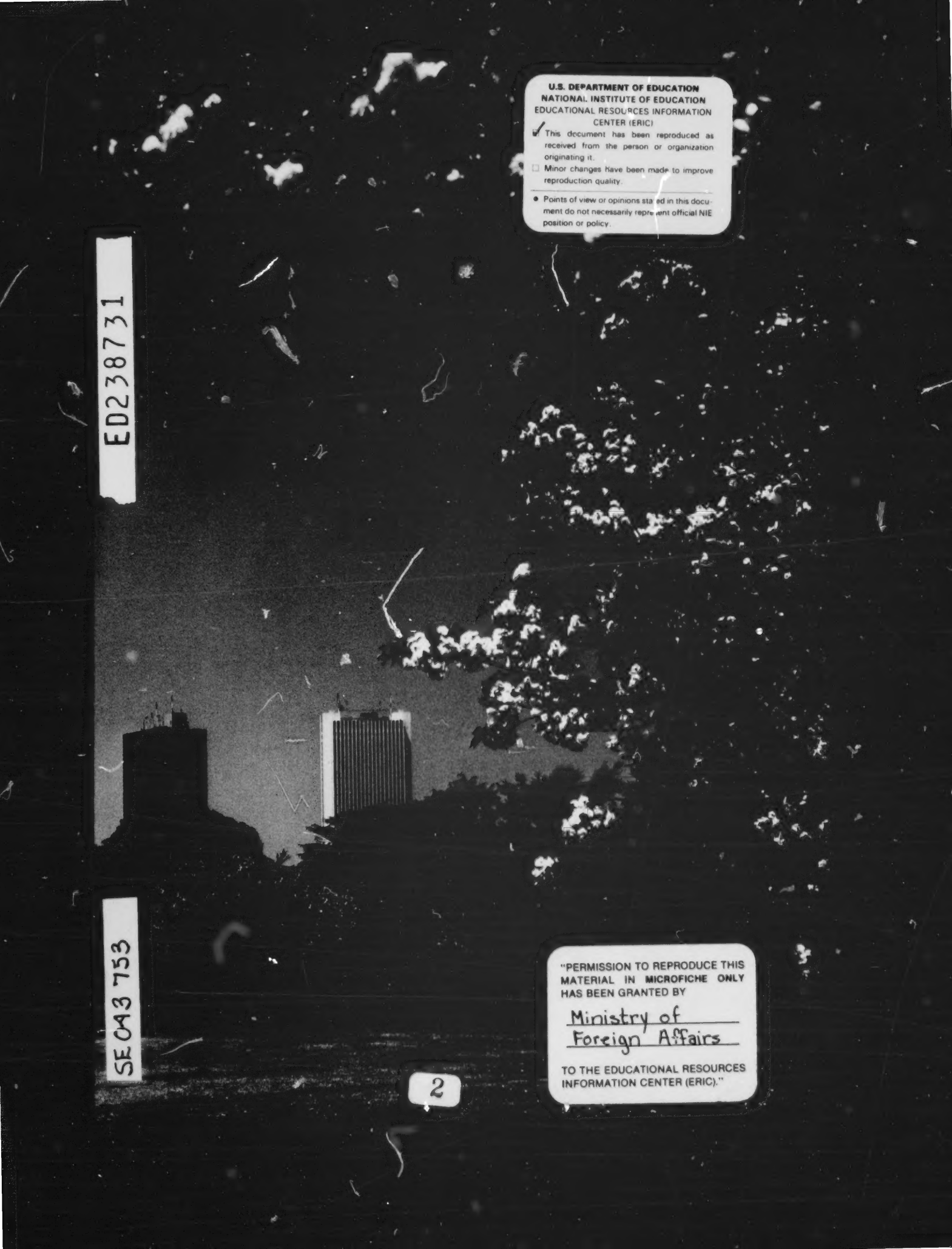

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THE JAPAN OF TODAY

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THE JAPAN OF TODAY

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INTRODUCTION

Japan has been called the world's most rapidly changing society. At the same time, Japan rests upon traditions reaching back into the mists of time. History and tradition, far from imposing barriers to change, have actually stimulated change in Japan in a manner perhaps unknown in other nations of the world.

Throughout their long history, the Japanese people have shown a unique aptitude for assimilating and adapting new ideas to their particular cultural milieu. This aptitude stems from the history and geography of Japan, which have created an unusually homogeneous people. Over the centuries, they developed institutions, customs, and characteristics that have given them a strong sense of national identity and common purpose.

The strength and stability derived from these features of the national life helped Japan undergo two major transformations in the last one hundred years, first in the late 19th century when it threw off a stagnant feudal system to embark upon the road to modernization and again in the mid-20th century when it turned away from the tragic experience of World War II to create a new society dedicated to peaceful cooperation and the democratic way of life. While these two periods brought almost revolutionary change in both the political and social structure, this was accomplished without discarding traditional roots or impairing social continuity.

One measure of this transformation is the high level of economic growth attained during the last quarter of a century, in which Japan has made itself into one of the world's leading industrial nations. In terms of a longer passage of time, Japan has transformed itself from an agricultural society content with minimum standards of living a mere one hundred years ago into an advanced industrial society with a national lifestyle based on higher standards of material, cultural, and intellectual achievement.

A second measure of this change can be found in the gradual internationalization of almost all aspects of the national life. Long limited in their contacts with the outside world, first by the accident of island geography, then by self-imposed isolation for two and a half centuries, and finally in the present century by war and occupation, the Japanese are now seeking their proper role within the framework of international cooperation. Japan today belongs to all major world forums, actively pursues a diplomacy for peace, and is contributing to greater mutual understanding as an active member of the community of nations.

In the last quarter of the 20th century, change will still characterize Japan's development as the people seek solutions to newly arising problems in the political, economic, and social fields and as the nation accepts growing responsibilities in the international area. Buttressed by their long history and by a fundamental sense of order and discipline, the Japanese people approach these challenges as their new tasks for the future and are determined to participate actively in the search for peace and justice in cooperation with all peoples who share like ideals.

⇦ *Starting a new year in the traditional way—a visit to a Shinto shrine in the purifying cold of early morning on New Year's Day.*

GEOGRAPHY

Area

Japan consists of four main islands—Hokkaido, Honshu, Shikoku, and Kyushu—in addition to a number of island chains and thousands of smaller islands and islets. The archipelago, lying off the eastern coast of the Asian continent, stretches in an arc, 3,800 kilometers (2,360 miles) long. It covers an area of 377,708 square kilometers (145,834 square miles).

Area of Main Islands (㎢)

Hokkaido	83,517	(32,246	sq. mi.)
Honshu	231,012	(89,194	sq. mi.)
Shikoku	18,800	(7,259	sq. mi.)
Kyushu	44,379	(17,135	sq. mi.)

Japan's total land area is about one-twenty-fifth that of the United States, one-ninth that of India, and one-and-a-half times that of Great Britain. In terms of world land area, Japan occupies less than 0.3 per cent.

Climate

The islands of Japan lie in the temperate zone and at the northeastern end of the monsoon area which reaches as far as India from Japan through the Korean Peninsula, China, and Southeast Asia. The climate is generally mild, although it varies considerably from place to place, largely due to the continental air currents from the northwest, dominating the winter weather, and the oceanic air currents from the southeast in the summer months.

The four seasons are clearly distinct. Summer, which is warm and humid, begins around the middle of July following a rainy season that usually lasts for about a month.

Except in northern Japan, winter is mild with many sunny days. Spring and autumn are the best seasons of the year with balmy days and bright sunshine, although September brings typhoons, which may strike inland with their torrential rains and violent winds.

Rainfall is abundant, ranging from 1,000 mm to 2,500 mm (40 to 100 inches) a year. Snow is heavy in the norhern parts of the country and in the interior mountainous regions in winter, providing superb sites for winter sports. Tokyo, the capital city, on the other hand, enjoys a relatively mild winter with low humidity and an occasional snowfall in contrast to the high temperatures and humidity of the summer months.

Japan also enjoys many hours of sunshine throughout the year, with Tokyo having 1,972 sunlight hours per year on the average.

The combination of plentiful rainfall and a temperate climate produces rich forests and luxurious vegetation that cover the entire countryside.

Climate in Tokyo

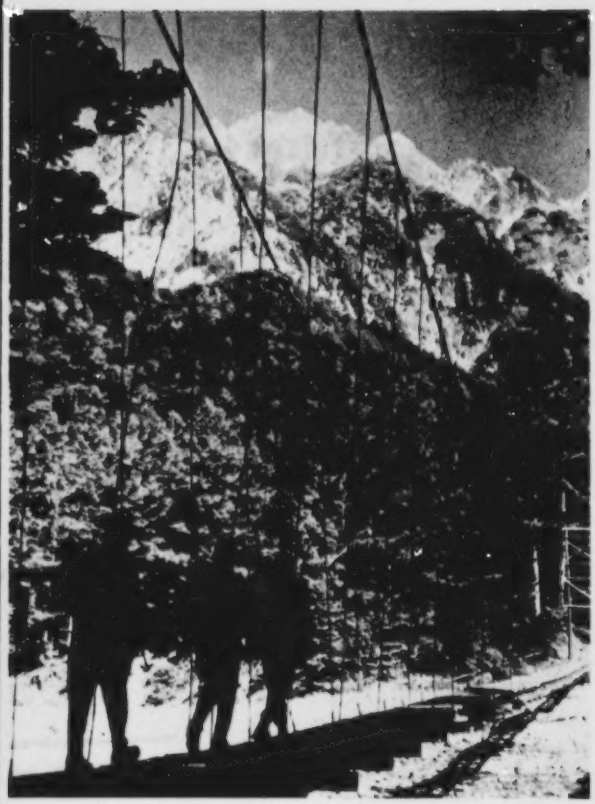
(Average, 1941-70)

	Jan.	Apr.	July	Oct.
Temperature				
Average (℃)	4.1	13.5	25.2	16.9
Maximum (℃)	9.4	18.4	9.2	21.1
Minimum (℃)	-0.4	9.1	22.1	13.5
Relative humidity (%)	57	66	79	74
Amount of precipitation (mm)	49	122	140	203
Number of rainy days	5	10	10	11

Topography

These climatic advantages are offset in a sense by a very complex topography. The Japanese islands are part of the "Circum-

(Top left) High peaks of the northern Japan Alps in summer; (right) winter scene in northern Japan.
(Center right) Islet-strewn sea area of the Saikai National Park off Kyushu.
(Bottom) Early spring in a mountain village. ⇨



Pacific Orogenic Zone" which runs from Southeast Asia through Japan to the Aleutian Islands and Alaska in the United States. While this has given Japan a long and rocky coastline with many small but excellent harbors, it has also created a large number of mountainous areas with numerous valleys, swift-flowing rivers, and clear-water lakes. In fact, mountains account for about 72 per cent of Japan's total land area. More than 532 of these mountains are over 2,000 meters high and the highest is Mt. Fuji, whose perfect cone rises some 3,776 meters (12,380 feet).

Mt. Fuji is a dormant volcano, its last eruption being in 1707. In all, Japan had 67 active volcanoes as of November 1979. These provide the country with one of its most pleasant amenities—mineral hot spring which are tapped more for recreational than for medical purposes. These springs feed numerous hot-spring resorts, which cater to millions of Japanese vacationers in search of rest and relaxation.

This volcanic activity also indicates the relatively "young age" of the Japanese islands, geologically, in the sense that the land structure is still being formed. Thus, there are frequent earth tremors, which go unnoticed by the average citizen, and the occasional earthquake.

In the overall picture, however, Japan's topography provides the land with beautiful and at times dramatic scenery: snow-fed mountain lakes, rocky gorges and turbulent rivers, rugged peaks and graceful waterfalls. These are a constant source of inspiration and pleasure to the Japanese and foreign visitors alike.

⇦ *(Top left) Red-capped Japanese cranes "dancing" in Hokkaido; (right) Japanese ptarmigans live in high mountains and change their protective coloring by season.*
(Below left) Rare photo of the elusive Japanese mainland fox; (right) tame Japanese deer in Nara Park.

HISTORY

Experts disagree about the origins of the Japanese race, but archaeologists have established that its early inhabitants included immigrants from various parts of East Asia and the South Pacific islands.

The ancestors of the Japanese people are generally believed to be an ethnic group, now known as the Yamato race, which gradually asserted its supremacy over other warring tribes and clans during the first three or four centuries A.D. The Yamato leaders are generally accepted as the ancestors of the Japanese Imperial family.

By the end of the 4th century A.D., contact was established between Japan and the kingdoms on the Korean Peninsula. Through Korea, such industrial arts as weaving, metal work, tanning, and shipbuilding, which had been highly developed in China under the Han Dynasty, were introduced into the country. During these early years, Korea and China were the sources from which Japan derived the crafts, arts, and learning that formed the foundations on which its own culture was gradually built.

The written form of Chinese, which uses ideographs or characters, was adopted, and through this medium the Japanese learned the rudiments of medicine, the secrets of the calendar and astronomy, and Confucianism. Buddhism was also introduced into Japan in 538 from India through China and Korea. The Chinese system of government provided a pattern on which Japan's rulers built their own system.

The country's first permanent capital was established in Nara at the beginning of the 8th century. For more than 70 years, from 710 to 784, Japan's Imperial family resided there and gradually extended its authority across the country. Until then, the capital, or the seat of the Throne, had been moved frequently within the area around the present cities of Nara, Kyoto, and Osaka.

A new capital was built in Kyoto in 794. It was modeled on the Chinese capital of

the time and remained the seat of the Throne for nearly 1,000 years.

The transfer of the capital to Kyoto marked the beginning of the Heian Period, which continued until 1192. This was one of the great periods of artistic development. Contacts with China were interrupted toward the end of the 9th century, and Japan's civilization began to take on its own special characteristics and forms.

This was a process of assimilation and adaptation by which things introduced from outside gradually assumed an essentially Japanese style. The most typical instance of this process was the development during the Heian Period of a native Japanese script. The complexity of Chinese ideographs led writers and priests to work out two sets of syllabaries based upon Chinese forms. By the middle of the Heian Period, these relatively simple letters, or *Kana* as they are called, had been perfected and brought into fairly wide use, opening the way for a literature of a pure Japanese style which was to flourish in place of that in the imported Chinese idiom.

Life in the capital was marked by great elegance and refinement. While the court gave itself up to the pursuit of the arts and social pleasures, its authority over the martial clans in the provinces became increasingly uncertain. Effective control of the realm gradually passed out of its hands and became the prize for which two rival military families, the Minamotos and the Tairas, both of which traced their descent from previous Emperors, engaged in one of the most celebrated and hard-fought struggles in Japan's turbulent middle ages. The Minamotos finally prevailed, annihilating the rival Taira clan in the epic Battle of Dannoura on the Inland Sea in 1185.

Feudal Age

The victory of the Minamotos marked the virtual eclipse of the Imperial Throne as the source of effective political power and the beginning of seven centuries of feudal rule under a succession of *shōgun*, or military rulers.

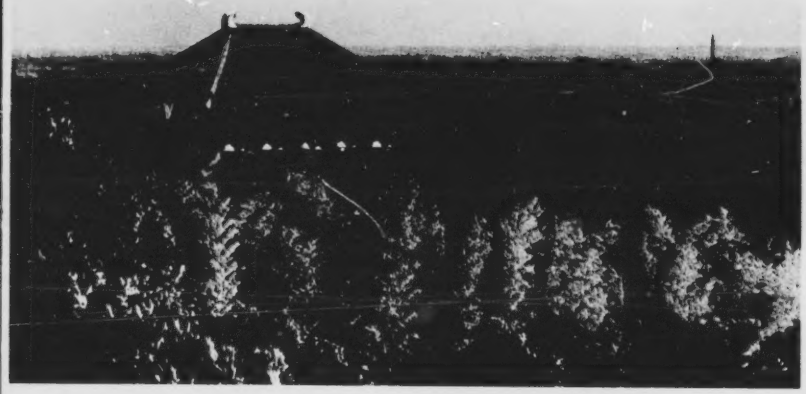
In 1192, Yoritomo, head of the victorious Minamoto family, established the Shogunate, or military government, at Kamakura, near what is today Tokyo, and assumed all administrative powers that had previously been held by the Emperors in Kyoto. In a reaction against what it considered the decadence of Kyoto in its devotion to the arts of peace, the Shogunate in Kamakura encouraged austerity and the pursuit of the martial arts and disciplines required to restore effective control throughout the land, especially over restive clans in the remoter provinces. While the preceding Heian Period was one in which the arts flourished, the Kamakura Period, as the age of Yoritomo's Shogunate is called, was an era in which *Bushidō* –the way of the samurai, or Japanese chivalry–prevailed.

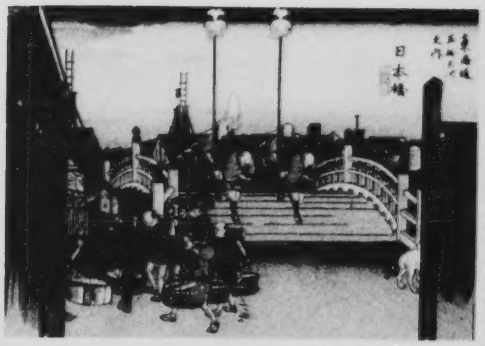
In 1213, power was transferred from the Minamotos to the Hojos, the family of Yoritomo's wife, who maintained the military government in Kamakura until 1333. During this period, the Mongolians twice attacked northern Kyushu, once in 1274 and again in 1281. Despite inferior arms, Japanese warriors successfully held the field and prevented the invaders from penetrating into the interior. Following the destruction of most of their fleet by typhoons which struck on both attempted invasions, the Mongolian force withdrew from Japan.

A short-lived restoration of Imperial rule, from 1333 to 1338, was followed by a new military government established by the Ashikagas at Muromachi in Kyoto.

The Muromachi Period continued for more than two centuries, from 1338 to 1573.

(From top right counter-clockwise) Part of an ancient mural showing Chinese and Korean cultural influences in the 7th and 8th centuries; Buddhist temples still dominate the skyline of the ancient capital city of Nara; medieval warrior and footmen parade in Kyoto's annual Jidai Matsuri (Festival of Eras); traditional dance of the Heian Period still performed at Itsukushima Shrine near Hiroshima. ⇨





Once again the pendulum swung back, from the Spartan disciplines of the Kamakura Period to a way of life in which the austere disciplines of *Bushidō* found expression in aesthetic and religious actitivies and set their mark indelibly for all ages on the country's arts, whose chief characteristic even today is a classic sense of restraint and simplicity.

After two centuries of rule, the Shogunate in Muromachi was confronted by a growing challenge to its authority from rival clans in other parts of the country. Toward the end of the 16th century, Japan was torn by civil wars as provincial lords battled for supremacy. Order was finally restored by the great general, Hideyoshi Toyotomi, in 1590. His work of pacifying and uniting the country was consolidated by Ieyasu Tokugawa, founder of the Tokugawa Shogunate. It was during this transitional period of civil wars (1573–1603) that many of Japan's most famous castles were built.

Unity in Isolation

Having established himself as effective ruler of all Japan, Ieyasu founded his Shogunate in Edo, as Tokyo was then known, in 1603. This was a major turning point in Japanese history. Ieyasu created the mold in which almost every facet of the nation's life, particularly its political and social institutions, was cast for the next 265 years.

As one means of preserving the integrity of the social and political structure which Ieyasu erected, the Tokugawa Shogunate took the drastic step of virtually closing Japan's doors to the outside world in 1639. The first Westerners had reached the shores of Japan in the previous century during the Muromachi Period. Portuguese traders landed on a small island in southwestern Japan in 1543, introducing firearms into the country. They were followed in the next few years by Jesuit missionaries, led by St. Francis Xavier, and groups of Spaniards. Dutch and British traders also established themselves on Japanese soil.

The influx of Europeans had a profound influence on Japan. The missionaries made numerous converts, particularly in southern Japan. The Shogunate realized that Christianity could be potentially as explosive a power as that of the firearms that accompanied them. Christianity was eventually proscribed, and the Shogunate barred entry to all foreigners, except a handful of Dutch and Chinese traders, who were confined to the small island of Dejima at Nagasaki. For two-and-a-half centuries, this tiny settlement was the only point of contact between Japan and the outside world. It was through this small door that Japanese scholars were able to acquire a basic knowledge of Western medicine and other sciences during the country's long period of isolation.

Restoration of Imperial Rule

Japan came under increasing pressure around the end of the 18th and the beginning of the 19th century to open up its shores to the outside world. At home, the rigid social and political structure created by Ieyasu was beginning to feel the stresses caused by the advancing times.

In 1853 Commodore Matthew C. Perry of the United States entered Tokyo Bay with a squadron of four ships. He returned the following year and succeeded in persuading the Japanese to conclude a treaty of amity with his country. This was followed by the conclusion of similar treaties with Russia, Great Britain, and the Netherlands in the same year, thus opening Japan once more to foreign intercourse. These treaties were changed four years later to treaties of com-

⇦ *(Top) Portuguese missionnaries and traders were popular themes of early 17th century genre paintings.*
(Center) Himeji Castle, built in 1608, is representative of the splendor of feudal Japan.
(Below left) Katsura Imperial Villa in Kyoto, completed in the mid-17th century, is famed for its refined architectural style and classic landscape garden; (right) ukiyo-e woodblock prints were part of the unique plebeian culture of the Tokugawa period.

merce, and a similar treaty was concluded with France.

The impact of these events increased the pressure of the social and political currents that were undermining the foundations of the feudal structure. There was great turmoil for about a decade, until the feudal system of the Tokugawa Shogunate collapsed in 1867 and full sovereignty was restored to the Emperor in the Meiji Restoration in 1868.

Modern Period

The Meiji Era (1868 — 1912) represents one of the most remarkable periods in the history of nations. Under Emperor Meiji, the country set out to achieve in only a few decades what had taken centuries to develop in the West—the creation of a modern nation with modern industries, modern political institutions, and a modern pattern of society.

In the first years of his reign, Emperor Meiji transferred the Imperial capital from Kyoto to Edo, the seat of the former feudal government. The city was renamed Tokyo, meaning "eastern capital."

A Constitution was promulgated, establishing a constitutional monarchy. The old classes into which society had been divided during the feudal age were abolished. The whole country threw itself with energy and enthusiasm into the study and adoption of modern Western civilization.

The Meiji Restoration was like the bursting of a dam behind which had accumulated the energies and forces of centuries. The surge and ferment caused by the sudden release of these energies made themselves felt overseas. Before the 19th century ended, the country became involved in the Sino-Japanese War of 1894-95, and ten years later, in the Russo-Japanese War. Japan emerged victorious from both, and mainly as a result of these wars regained South Sakhalin, which it had ceded to Russia in 1875 in exchange for the Kurile Island, and acquired Formosa, Korea, and special interests in Manchuria.

Emperor Meiji, whose enlightened and imaginative rule had helped to guide the nation through the dynamic decades of transformation, died in 1912, before the outbreak of World War I.

By the end of World War I, which Japan entered under the provisions of the Anglo-Japanese Alliance of 1902, Japan was recognized as one of the world's great powers. Emperor Taisho, who succeeded Emperor Meiji, was in turn succeeded by the present Emperor, His Majesty Hirohito, in 1926, and the present era, named Showa, began.

This era opened in an atmosphere of promise. The nation's industries continued to grow. Its political life seemed soundly rooted in parliamentary government. New factors, however, began to have a disturbing influence. The worldwide depression unsettled the nation's economic life. Public confidence in the political parties waned after the exposure of a number of scandals. The situation was exploited by extremists, and the military clique seized the opportunity offered them by the confusion of the times. The influence of the political parties steadily declined. After the outbreak of the incident at Lugouqiao in 1937, they were forced to unite on a single platform of cooperation in the war effort. They were finally dissolved, and in their place was erected a united national party. With the Diet's functions reduced to little more than those of a rubber stamp, there could be no parliamentary obstruction to the tide of events that finally led to the outbreak of the Pacific War in 1941.

Finally, in August 1945, an exhausted and battle-weary nation accepted the surrender terms of the Allied powers and by Imperial edict the people laid down their arms.

A New Japan

Seven years laters, in September 1951, Japan signed the peace treaty at San Francisco with 48 nations and regained its sovereign independence in April 1952 when the treaty came into effect. Japan once again took its place as a member of the community of nations, ending a period of change hardly less revolutionary than that in

the previous century under Emperor Meiji.

Within about one year following the signing of the treaty, Japan had joined all the specialized agencies of the United Nations and in December 1956 was admitted to full membership as the 80th member state of the world body.

This acceptance in the world community seemed to signal revitalization of Japan and the following decade was characterized by a remarkable degree of growth and development, both in terms of domestic economic expansion and increased participation in activities on the international level.

The growth rate of the gross national product reached 9.0 per cent in the 1950s and even higher to over 11 per cent in the 1960s, outpacing the growth rate of the more advanced industrial states of the West. This achievement led Japan to be designated as an Article 8 nation of the International Monetary Fund, thereby ending trading and foreign exchange restrictions, and to be accepted as a member of the OECD (Organization for Economic Cooperation and Development), both in 1964.

Two events of major international importance served to focus world attention on Japan's success in this process of growth and development. Tokyo was host to the 18th Olympic Games in October 1964, for which thousands of visitors from abroad visited Japan and saw at firsthand the remarkable transformation that was then taking place to bring Japan to the forefront as a modern industrialized nation and society.

The second event was EXPO '70, the Japan World Exposition held for six months in 1970 in the Senri Hills outside Osaka. The first world exposition ever to be held in Asia, it brought together the largest assemblage of nations in the long history of the event, and for Japan, it represented a culmination of the nation's persistent efforts to achieve industrial and technological progress.

Unsuspectingly, however, EXPO '70 brought to a close the age of Japan's rapid economic expansion and its fast transformation into a society of consumption-oriented prosperity.

The shift to a low growth economy, together with an increasingly severe international economic environment and the growing demand for Japan's "internationalization," has greatly influenced the lives of the Japanese people, bringing about changes in their thinking and lifestyles. For instance, their values have become diversified, and many are now placing more importance on self-expression and the pursuit of more personalized values.

This general trend has been reflected in the nation's political goals and government policies, in response to the people's more diversified views and demands. For instance, political parties advocating new political lines have arisen while slight but unmistakable changes are being seen in the position of the ruling conservative party that has held the seat of power almost exclusively since the end of World War II. Similar shifts are appearing in the attitudes of the various opposition parties as well.

Although many traditional social norms, such as the high value placed on group harmony, still remain basically unchanged in Japanese society there have been some major social transformations as exemplified by the increase of "nuclear" families as against the traditional families where two or more generations live together. With the collapse of many of the old patterns of communal life in the nation's towns and villages after the war, new local administrative measures have been taken to improve and broaden the well-being of the local community. The residents themselves, now more fully aware of the diversity offered by modern lifestyles, are seeking ways to improve the quality of life in their own communities, including the preservation and promotion of local cultural heritages.

The Japanese people have come to realize the "importance of a humanistic and spiritually worthwhile life," which was often forgotten in the past amidst the nation's single-minded economic endeavors. Corresponding to this change in awareness is a recognition of the need to reexamine family and community ties and other basic aspects of the people's daily life, as the nation faces

the challenging task of adapting its culture and lifestyle to a changing world.

The disproportionate expansion of industrial resources under the impetus of high rates of growth began to create problems of its own, notably in ecological and environmental disruption. The growing worldwide concern over limited natural resources began to dim the glow of everlasting development.

Japan in the latter years of the twentieth century has thus turned to the task of following a slower but more stable path of economic growth. The concern of both the government and the people alike is now directed toward providing broader social welfare programs and creating a living environment better suited to the pursuit of healthier and more satisfying modes of life.

(From top) Children at a terakoya school in pre-Meiji days; Tokyo Station, center of the Japanese National Railway system; Peace Memorial Park in Hiroshima showing the preserved remains of the domed building under the epicenter of the August 1945 atomic explosion. ⇨

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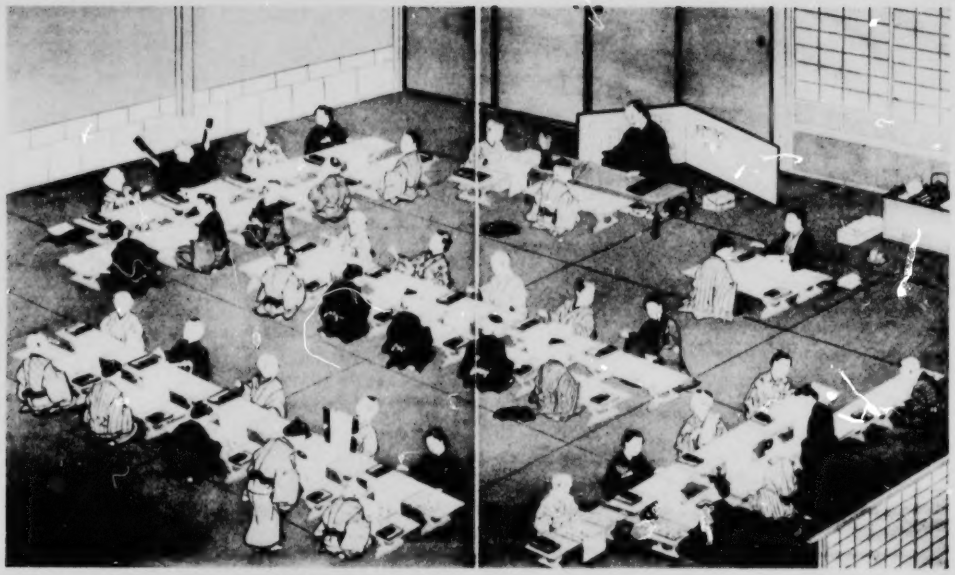
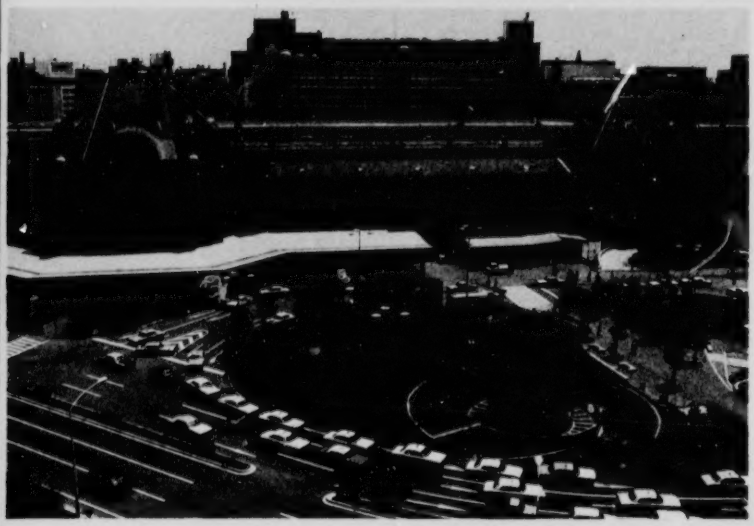




GOVERNMENT

CONSTITUTION AND EMPEROR

In the new Constitution, which was promulgated on November 3, 1946, and came into effect on May 3 the following year, the Japanese people pledge to uphold the high ideals of peace and democratic order. The Preamble of the Constitution states:

> "We, the Japanese people, desire peace for all time....We desire to occupy an honored place in an international society striving for the preservation of peace, and the banishment of tyranny and slavery, oppression and intolerance for all time from the earth."

The new Constitution differs in many important respects from the Meiji Constitution of 1889. Some of its key provisions are:

The Emperor is the symbol of the State and of the unity of the people. Sovereign power now rests with the people.

Japan renounces war as a sovereign right. It also renounces the threat or the use of force as means of settling disputes with other nations.

Fundamental human rights are guaranteed as eternal and inviolable rights.

⇦ *The Diet building containing the two houses of Parliament.*

The former House of Peers is replaced by the House of Councillors, whose members, like those of the House of Representatives, are elected as representatives of all the people. The House of Representatives has preeminence over the House of Councillors.

Executive power is vested in the Cabinet, which is collectively responsible to the Diet.

Local self-government is established on an extensive scale.

The Emperor has no powers related to government. He performs only those acts that are stipulated in the Constitution. Thus, for example, he appoints the Prime Minister and the Chief Justice of the Supreme Court. The Prime Minister, however, is first designated by the Diet and the Chief Justice by the Cabinet. The Emperor also performs such acts on behalf of the people as promulgating laws and treaties, convoking the Diet, and awarding honors, with the advice and approval of the Cabinet.

Imperial Family

His Majesty the Emperor of Japan, Hirohito, was born in Tokyo on April 29, 1901. He studied at the Peer's School and later at an institute specially established for his education.

As Crown Prince, he traveled in Europe for six months in 1921 and became Prince Regent shortly after his return. In 1924, he married Princess Kuni, now Her Majesty Empress Nagako. He succeeded to the throne in 1926. Emperor Hirohito is noted for his studies in marine biology. He devotes much of his leisure time to research in this field and has published a number of books based on his studies.

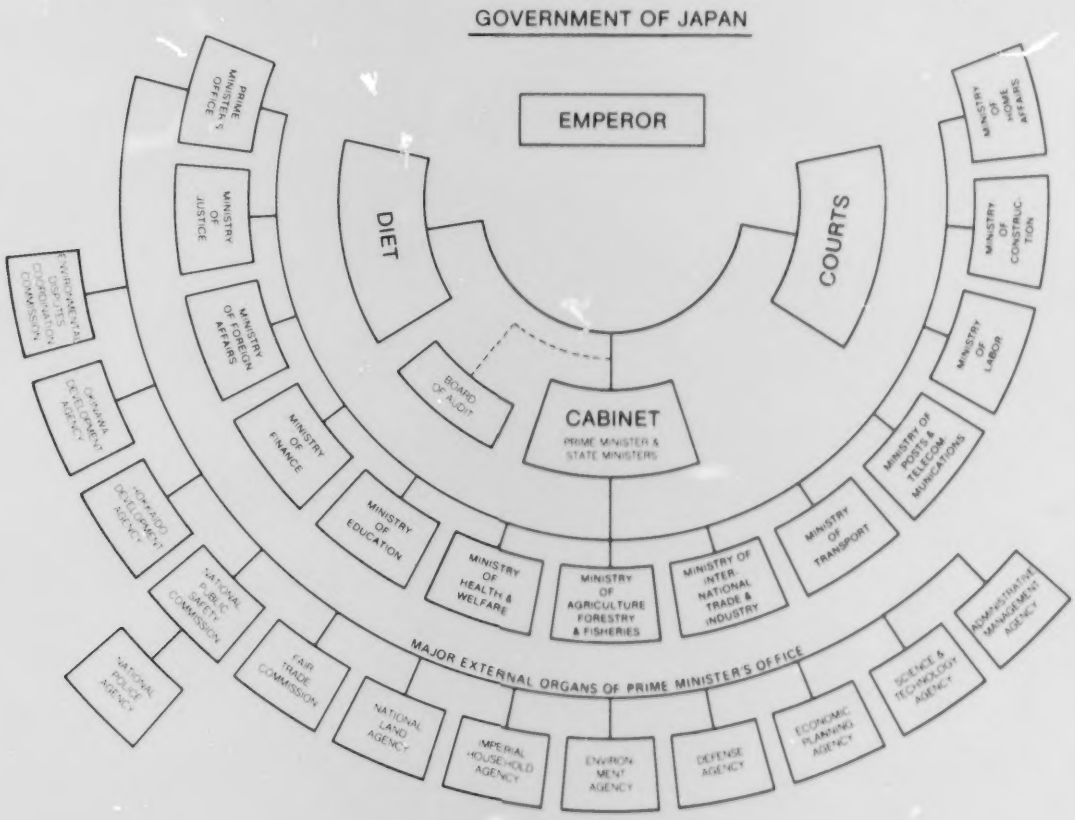
In the autumn of 1971, Their Majesties paid official visits to Belgium, the United Kingdom, and the Federal Republic of Germany, unofficial visits to Denmark and the Netherlands, and private visits for rest to France and Switzerland. In October 1975, the Imperial Couple paid an official visit to the United States.

His Imperial Highness Crown Prince Akihito was born in Tokyo on December 23, 1933. In addition to studying under pri-

vate tutors, he attended the Gakushuin Boys' High School until 1952 and Gakushuin University until 1956. He married Her Imperial Highness Crown Princess Michiko in April 1959. They have two sons and one daughter, Prince Naruhito, born in February 1960, Prince Fumihito, born in November 1965, and Princess Sayako, born in April 1969.

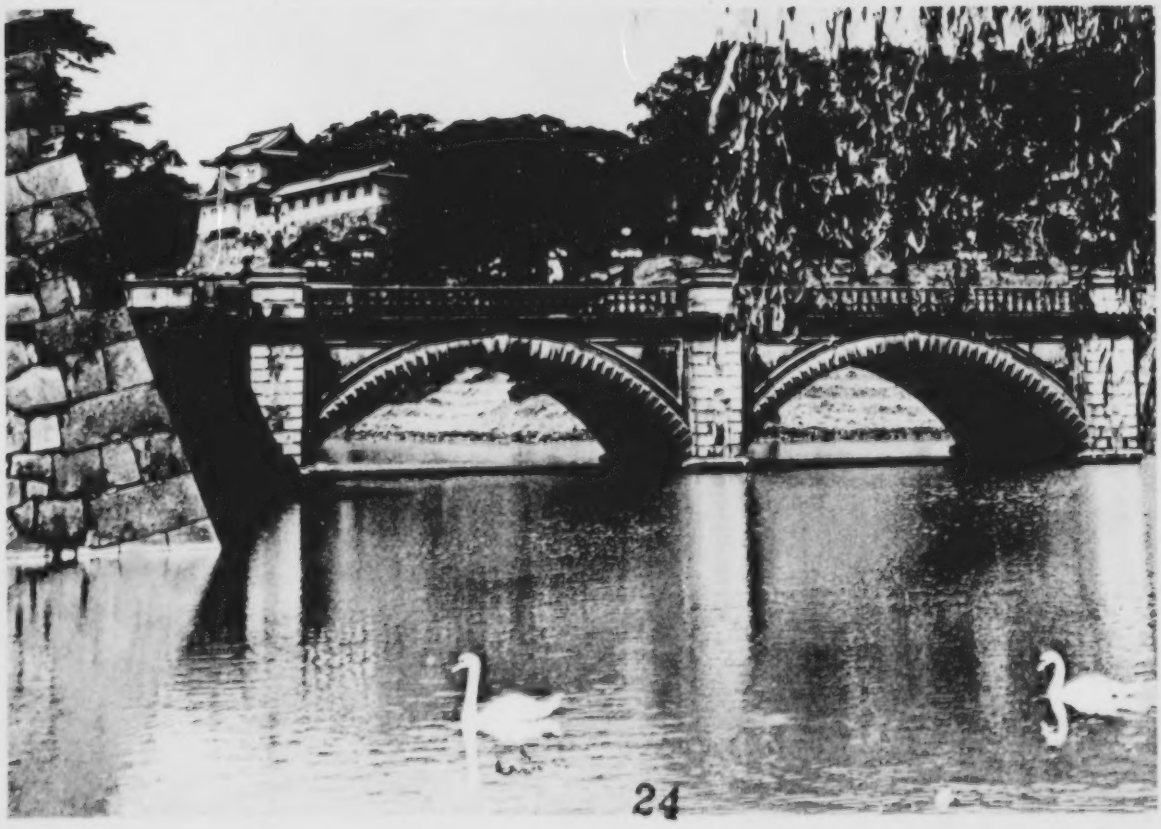
The Crown Prince has traveled abroad many times. In 1953, he attended the coronation of Her Majesty Queen Elizabeth II in London and then visited 14 countries in Western Europe and North America. Since their marriage, Their Imperial Highnesses have visited 30 countries (as of 1981) at the invitation of the respective Governments.

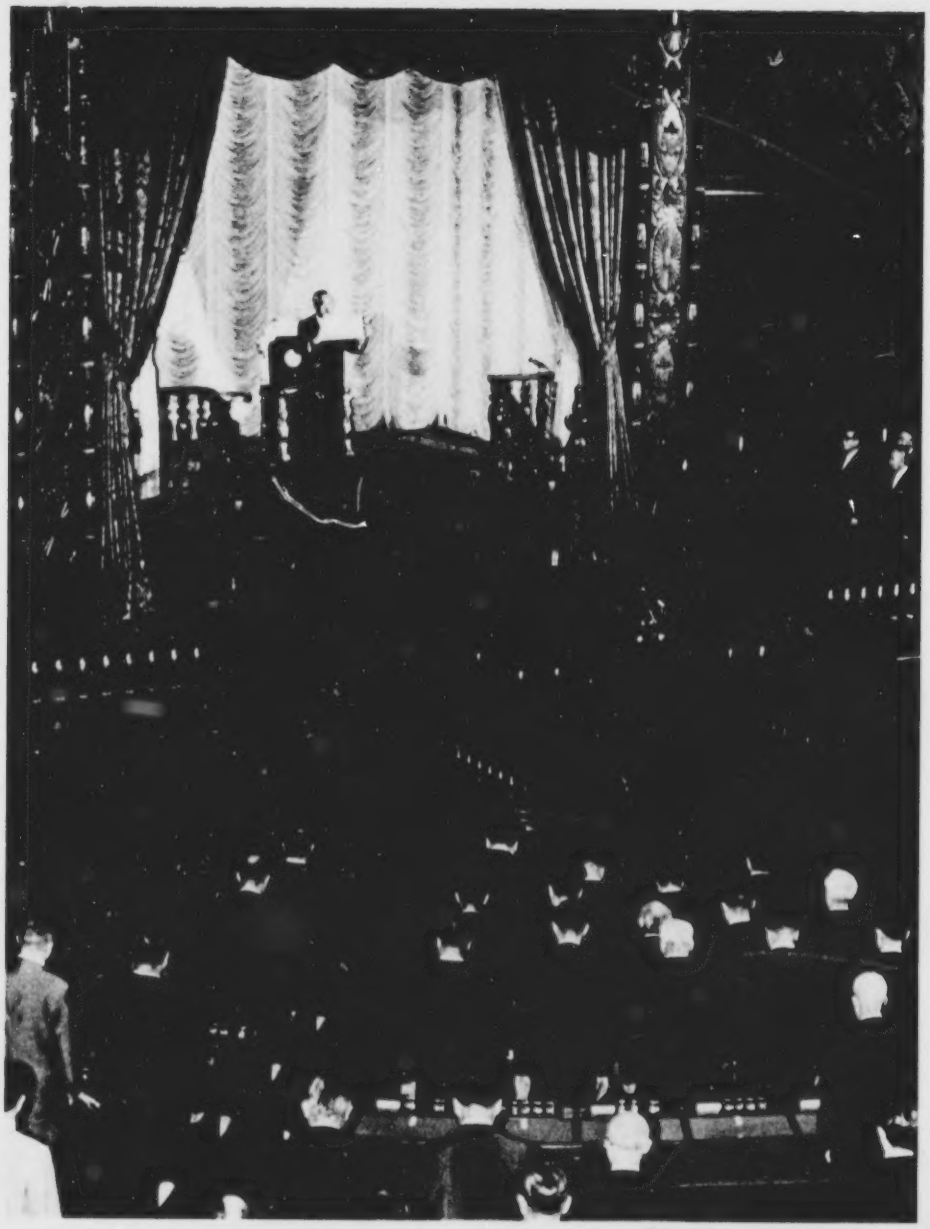
The Emperor's younger son is His Imperial Highness Prince Hitachi. He married Her Imperial Highness Princess Hanako in September 1964. Like the Crown Prince and

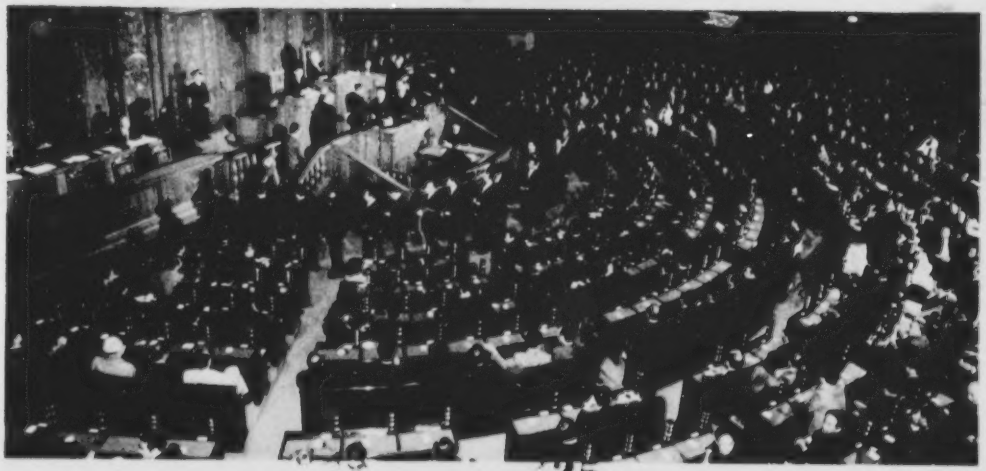


Major ministerial agencies: Tax Administration Agency (Ministry of Finance), Agency for Cultural Affairs (Ministry of Education), Social Insurance Agency (Ministry of Health and Welfare), Food Agency and Forestry Agency (Ministry of Agriculture, Forestry and Fisheries), Natural Resources & Energy Agency (Ministry of International Trade and Industry), and Maritime Safety Agency (Ministry of Transport).

(Top) Their Majesties the Emperor and Empress and their family.
(Below) Nijubashi (double bridge), main entrance to the Imperial Palace. ⇨







Princess, the young couple visit many parts of the country to participate in various ceremonial occasions related to national activities in the fields of culture, education, sports, and social welfare. They have also undertaken a number of goodwill tours abroad.

Other members of the Imperial Family include Princess Chichibu (widow of the late Prince Chichibu, younger brother of the Emperor), Prince and Princess Takamatsu, and Prince and Princess Mikasa. Prince Takamatsu and Prince Mikasa are also younger brothers of the Emperor.

With the abolition of the peerage after the war, only members of the Imperial Family retain princely titles. The daughters of the Emperor, who are all married, no longer retain their Imperial titles.

LEGISLATURE

The Diet is the highest organ of State power and the sole law-making body. It consists of the House of Representatives with 511 seats and the House of Councillors with 252 seats.

The Members of the House of Representatives are elected for a term of four years, but this term may be terminated before the expiry of the four years if the House is dissolved. Members are elected from 130 constituencies, which, with one exception, are multimember constituencies of three to five members, depending on the size of the population.

Members of the House of Councillors are elected for a term of six years. Half of its members are elected every three years. One hundred members are elected from what is called the National Constituency, which means that they are elected by voters throughout the country. The remaining 152 members are elected in 47 prefectural constituencies.

Japan has universal adult suffrage. All men and women aged 20 and above are eligible to vote in all elections.

Political Parties

There are seven parties at present; the Liberal Democratic Party, the Japan Socialist Party, the Komeito, the Democratic Socialist Party, the Japan Communist Party, the New Liberal Club and the United Social Democratic Party. The Liberal Democratic Party is now ruling and the other six parties are in opposition.

The Liberal Democratic Party is Japan's major conservative political grouping. The party was formed in November 1955, through the merger of the Liberal Party and the Japan Democratic Party, two conservative parties founded after the war. Inheriting the tradition of Japan's two major political parties from the early years of the century, the Liberal Democratic Party regards the protection of liberty, human rights, democracy, and parliamentarism as its fundamental mission.

Its policy aims are (1) to perfect Japan as a cultural and democratic state by enhancing the functions of existing institutions in line with the best principles of democracy; (2) to strive for improved international relations on the basis of universal justice for a mankind that aspires after peace and freedom and to seek to build up a self-reliant and independent Japan; and (3) to plan and implement a comprehensive economic program based on individual initiative and free enterprise, keeping in mind the welfare of the public, and to stabilize the people's livelihood and achieve a welfare state.

The Japan Socialist Party was first formed in November 1945, through a merger of different proletarian parties of prewar days. After a split into left- and right-wing parties in 1951, the unified party made a second appearance in October 1955. The party aims at the realization of socialism, with its eco-

The Emperor formally opening a session of the Diet; voting in the House of Representatives in plenary session.

nomic policy directed toward a planned economy and the nationalization of main industries. In foreign relations, the party calls for unarmed neutralism and is opposed to the Treaty of Mutual Cooperation and Security between Japan and the United States (the Japan–U.S. Security Treaty), although the party chairman in a speech in New York on November 20, 1979, said he desired to see the treaty terminated by "mutual agreement", rather than by an immediate unilateral declaration, so as not to damage Japan-U.S. relations, and to have it replaced by a treaty of friendship.

According to its constitution, the party's objective is the creation of a socialist society in Japan through a "peaceful and democratic revolution" while protecting the current Constitution of the nation and the basic rights of individual citizens. The party's platform claims that it is a party for the masses with the working class as its core, including those engaged in farming, fishery, and small- and medium-sized enterprises as well as intellectuals and the working people in general. At the general election held in April 1947, the party won the largest number of seats for both Houses and formed a coalition cabinet with two of the three then-existing conservative parties. The Socialist-led coalition government, the first of its kind to appear in Japan, lasted from May 1947 till March 1948.

The Komeito was formed in November 1964, originally as the political arm of the "Soka Gakkai," a religious group of the Nichiren Shoshu sect of Buddhism. Participating in its first general election in January 1967, the party succeeded in having 25 of its candidates elected to the House of Representatives. The party has since declared its independence from religion. According to its party platform, the party is "based on middle-of-the-road reformism." The aims of the party's policies include constructing a welfare society based on a "new concept of humanitarian socialism" and creating a firmer foundation for parliamentary democracy.

In its foreign and defense policies, the party continues to maintain its policy of seeking "equi-distant perfect neutrality" without leaning toward any particular country. At the same time, it has begun to incline toward acknowledging the existence of the Japan-U.S. Security Treaty and the Self-Defense Forces. In December 1979, the party reached agreement with the Democratic Socialist Party to keep the two systems under certain conditions, in the event that a coalition regime becomes possible between the two parties.

The Democratic Socialist Party was formed in January 1960 by a group that broke away from the Socialist Party the previous year. It stands against extreme ideologies and is dedicated to the creation of a socialist society through democratic processes. According to the party's platform, the party, which endeavors to "overcome capitalism and totalitarianism, whether of the left or of the right," is not a class party but is "a popular party which recognizes the diversity of interests among various social groups and at the same time the existence of common national interests." Advocating the adoption of a planned economy which will make possible the "rational distribution of ecnomic resources," the party intends to "renovate the structure in which profit-seeking is the primary motive" and to "create an economic order in which the public interest is given preference." In foreign affairs, the party altered its policy of "gradual dissolution" of the Japan-U.S. Security Treaty at the end of 1975, and decided to seek "improvement of the working of the treaty while acknowledging its functions."

The Japan Communist Party was founded as an underground political association in July 1922. Before and during the war, the party, like some of the other reformist parties, was subjected to persistent government suppression and its leaders imprisoned. Its first postwar convention was held in December 1945, and its organ paper, *Akahata* (Red Flag), revived publication. According to its constitution, the party aims at the realization of a communist society in Japan "through a democratic revolution of the people and a subsequent socialist revolution" and by developing "self-reliantly

and creatively the theory and practice of the Japanese revolution." While still advocating the "fight against the rule of U.S. imperialism and Japanese monopoly capital in order to liberate the working class and people from exploitation and oppression," the party decided at its congress to remove its old phrase "dictatorship of the proletariat" from the party program. The party also replaced the words "Marxism-Leninism" with "scientific socialism." For the nation's foreign policy, the party calls for the abolition of the Japan-U.S. Security Treaty, declaration of neutrality, and establishment of friendly relations with all nations.

The New Liberal Club was formed in June 1976 by six Diet members who had withdrawn from the Liberal Democratic Party. According to its "Basic Concepts," announced shortly afrer its inauguration, the new political party follows the basic lines of conservative politics, upholding the ideals of a free society and the free economic system and supporting the Japan-U.S. security arrangements. At the same time, the group believes that in today's Japan, the demands of the people have increased in complexity and diversity. Its "Basic Concepts" states in this connection that the simplistic political confrontation pattern of management versus labor, big business versus small enterprise, metropolitan areas versus rural districts, as well as the inflexible ruling party–opposition confrontation in the Diet no longer generates any confidence in the existing political parties. The party contends that many people with newer and freer ways of thinking have turned away from the old parties with their functional rigidity and fallen into political apathy. It also believes that the long-continuing rule by a single conservative party must be terminated. While advocating a new liberalism for the nation, the party emphasizes its intention to promote government with a greater degree of public participation and to place top priority on reviewing the nation's educational system.

The United Social Democratic Party was officially formed in March 1978 with the merger of two minor political groups, one of three Diet members who bolted the Socialist Party the previous year, and the other of three Diet members in the Socialist Citizen's League. They started the new party with the aim of establishing a new, liberal socialism through the accumulation of efforts for gradual socialist reform of the political system. At the core of the party are former right-wing members of the Socialist Party who are opposed to the political doctrines and ideology of the left-wing Socialists.

Political Party Composition of the Japanese Diet as of July 1, 1982

	House of Representatives	House of Councillors
Liberal Democratic Party	287	135
Japan Socialist Party	104	47
Komeito National Council	34	27
Democratic Socialist Reformist Alliance	31	11
Japan Communist Party	29	12
New Liberal Club Democratic Federation	13	—
New Statesmen Club	—	7
Ni-in Club	—	3
Independents	7	6
Vacancies	6	4
Total	511	252

In the Diet, the Komeito is registered as the Komeito National Council and the Democratic Socialist Party as the Democratic Socialist Reformist Alliance.
The New Liberal Club and the United Social Democratic Party have formed a coalition to act together in the Diet as the New Liberal Club Democratic Federation in the House of Representatives and the New Statesmen Club in the House of Councillors.

EXECUTIVE

Executive power is vasted in the Cabinet, which consists of the Prime Minister and not more than 20 Ministers of State and is collectively responsible to the Diet.

The Prime Minister is designated by the Diet and must himself be a member of the Diet. He has the power to appoint and dismiss the Ministers of State, all of whom must be civilians and a majority of whom must be members of the Diet.

If the House of Representatives passes a resolution of non-confidence or rejects a resolution of confidence in the Government, the Cabinet must resign, unless the House of Representatives is dissolved within ten days.

As of April 1982, there were 12 ministries and 32 agencies in addition to the Prime Minister's Office, and there were a total of 1,199,600 government employees, including 243,800 personnel of the Self-Defense Forces.

In addition to these, there is the Board of Audit, an independent constitutional body, which is responsible for the annual auditing of the accounts of the State.

For the purpose of local administration, Japan is divided into 47 prefectures, including the Metropolis of Tokyo. Local administration is conducted at the levels of prefectural, city, town, and village governments, each with their respective assemblies.

The prefectural governors and city, town, and village mayors, as well as the members of the local assemblies, are all elected by the registered voters within the district concerned. As of April 1981, local governments had a total of 3,206,000 employees, including 972,000 teachers and 212,000 policemen.

JUDICIARY

The judiciary is completely independent of the executive and legislative branches of government.

The judiciary system consists of the Supreme Court, eight high courts, a district court in each of the prefectures, with the exception of Hokkaido which has four, and a number of summary courts. In addition, there are many family courts to adjudicate domestic complaints.

The Supreme Court is composed of a Chief Justice and 14 other Justices. The Chief Justice is appointed by the Emperor upon designation by the Cabinet, while the other 14 Justices are appointed by the Cabinet.

The lower court judges are appointed by the Cabinet from a list of persons nominated by the Supreme Court. All lower court judges are appointed for ten years, although there is no restriction on their being re-appointed.

All judges are independent in the exercise of their conscience and are bound only by the Constitution and the laws enacted thereunder. No judge can be removed except by public impeachment unless judicially declared mentally or physically incompetent to perform his official duties. Every judge must retire at an age set by law.

The appointment of the Justices of the Supreme Court is subject to review in a national referendum, first at the time of the general election following their appointment and then at the general elections following the lapse of ten-year periods. In addition, impeachment may be ordered by a Court of Impeachment, which consists of members of the House of Representatives and the House of Councillors. The Supreme Court is the court of last resort in determining questions of constitutionality of any law, order, regulation, or official act.

Trials must be conducted and judgment declared publicly, unless a court unanimously determines publicity to be dangerous to public order morals. However, trials of political offenses, offenses involving the press, or cases relating to the rights of the people as guaranteed in the Constitution must always be conducted publicly.

(Top left) The Supreme Court building in Tokyo; (right) legislative assembly of a municipal government.
(Center right) A mayor and officials meeting with local residents.
(Below) Information counter at a municipal government office. ⇨

受付

FOREIGN RELATIONS

The basic objective of Japanese foreign policy is to contribute to world peace and stability and to the harmonious progress of the entire international community by further promoting cooperation and dialogue among the nations of the world.

Japan conducts its foreign policy as a nation committed steadfastly to peace under its peace Constitution by pursuing a broadly-ranged diplomacy of dialogue with all nations from a global point of view, irrespective of differences in domestic political and social systems or in international positions.

This basic line of Japan's foreign policy has been followed without prejudice to the country's friendly and cooperative relations with the Western democracies, namely countries in North America, Western Europe, and Oceania that share with Japan the same ideals as well as similar social and economic systems. Japan's close and abiding relationship with the United States, in particular, is the cornerstone of its foreign policy.

Japan also considers it important to maintain and further promote its traditional relations of friendship with its neighbors in Asia, especially East Asian countries.

Diplomacy for Peace

After the end of World War II, Japan made a renewed start as a peace-loving democratic nation. The people of Japan, having experienced the deep misery of war, including the atomic bombing of Hiroshima and Nagasaki, are deeply committed to the national policy of promoting world peace.

The Constitution of 1946 declares that the Japanese people, who "forever renounce war as a means of settling international disputes," aspire to achieve an abiding world peace and are determined to strive toward that goal.

This ideal of the Japanese people is expressed in the nation's diplomacy for peace which also recognizes the reality that Japan is extremely vulnerable from the security standpoint because it consists of a small strip of narrow but densely populated land. Japan believes that this diplomacy of peace through dialogue and international cooperation will lead to the attainment of its own security as well as the advancement of its people's well-being.

The United Nations

Japan has been implementing its diplomacy for peace by promoting manifold bilateral relations on the one hand and through participation in a wide range of multilateral efforts on the other. This latter approach focuses on the United Nations and other multilateral organizations.

Since joining the United Nations in 1956, Japan has been cooperating to the fullest extent possible in the various activities of the world body as well as its specialized agencies, with a view to promoting peaceful settlement of international disputes, preventing the occurrence of armed conflicts, strengthening the rules of international law, and contributing to the solution of the North-South problem.

Japan has served on the Security Council, the Economic and Social Council, and many other councils and boards of the United Nations.

In terms of financial support, Japan now ranks after the United States and the Soviet Union in the level of its assessments for the world organization's regular budget. Japan also makes substantial voluntary contributions to a wide range of U.N. organs and funds.

(Top) The Summit meeting in session at the Versailles Palace, France, in 1982.
(Below) Press conference after Summit meeting.

Disarmament

Japan has a Constitution that pronounces peace as the national commitment, and is determined, under this Constitution, not to become a military power, maintaining the "three non-nuclear principles" as a matter of national policy—not possessing nuclear weapons, not producing them, and not permitting their introduction into Japan.

In light of these basic policies, disarmament is one of the most serious concerns in our diplomacy. There is no doubt that top priority is given to nuclear disarmament, because Japan is the only country which has experienced atomic bombs. In the field of nuclear disarmament, prompt conclusion of a comprehensive test ban treaty and strengthening of the non-proliferation treaty are two main issues which Japan has been seeking to achieve.

Japan has been earnestly appealing at the United Nations and other fora to the nuclear weapon states, including the U.S. and the Soviet Union, to make serious efforts to realize nuclear disarmament.

In the field of non-nuclear disarmament, Japan places great importance on the prohibition of chemical weapons. It is also clear that general and complete disarmament cannot be achieved unless conventional weapons disarmament advances in parallel with nuclear disarmament.

Prime Minister Zenko Suzuki, at the 1982 General Assembly of the United Nations Devoted to Disarmament, appealed to all members to support three principles in order to achieve peace through disarmament: First is to reverse the trend of the ever-increasing arms race by promoting mutual confidence among states, pursuing, in particular, disarmament of nuclear weapons, those weapons which pose the greatest threat to the survival of mankind. Second is to utilize the human and physical resources, released by disarmament to alleviate the poverty and social instability which breed conflict. Third is to strengthen and reinforce the peace-keeping functions of the United Nations in order to promote disarmament.

Japan which is a High Contracting Party of such treaties as the Treaty on the Non-Proliferation of Nuclear Weapons, the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water, etc., has also become a party to the convention on the prohibition of the development, production and stockpiling of bacteriological (biological) and toxin weapons and on their destruction, the convention on the prohibition of military or any other hostile use of environmental modification techniques, and the convention on prohibitions or restrictions on the use of certain conventional weapons which may be deemed to be excessively injurious or to have indiscriminate effects.

Relationship with the United States

Japan and the United States have a close and deep relationship covering almost all aspects of their national lives and recognize the vital importance of maintaining these close ties of friendly cooperation. This firm relationship with the United States is the cornerstone of the nation's broad and multilateral diplomacy. The two countries enjoy close and mutually beneficial economic relations, with two-way Japan-U.S. trade exceeding $63.9 billion in 1981. The two nations, moreover, share a profound commitment to democratic values and institutions, and the two governments are dedicated to a cooperative multilateral effort to strengthen world peace and to promote world stability and economic social development.

Japan, while endeavoring to improve its self-defense capabilities within its constitutional limitation, has been following a policy of supplementing its defense effort with a mutual security system with the United States under the terms of the Japan-U.S. Treaty of Mutual Cooperation and Security.

In September 1951, Japan concluded the Security Treaty with the United States to ensure its security in the absence of its own defense power. Then in January 1960, Japan signed the present Treaty of Mutual Cooperation and Security with the United States which had been revised to meet the

new situation.

This formula, which has been contributing not only to Japan's security but also to the maintenance of peace in the Far East, is firmly maintained as the basis for the nation's security policy.

Relationship with the Soviet Union

In October 1956, Japan and the Soviet Union signed a Joint Declaration terminating the state of war between the two countries and re-establishing diplomatic relations.

Since then, relations have developed gradually but steadily in various fields, such as trade, aviation, and cultural interchange, and these relations are expanding year after year.

However, no peace treaty has yet been concluded between the two countries since the Northern Territorial Issue remains unresolved. (The question of the Northern Territorial Issue involves the restoration to Japan of four islands off the northeastern tip of Hokkaido—the Habomais, Shikotan, Kunashiri and Etorofu—which have been occupied by the Soviet Union since the end of World War II.)

Relationship with China

Relations between Japan and China were normalized in September 1972 when the Prime Minister and Foreign Minister visited Peking to meet the Chinese leaders. Since then, ambassadors have been exchanged and the four agreements provided for in the Japan-China Joint Communiqué of September 1972 — trade, aviation, shipping, and fishery—have been concluded. Thus, on the basis of this framework, relations with China are steadily developing. After a series of negotiations, the Treaty of Peace and Friendship was signed between the two countries in August 1978.

Relations with Other Asian Countries

The nations of Asia and Japan are neighbors who share a common interest in peace and prosperity, and Japan's relations with these countries constitute the foundation for its foreign policy. It is Japan's basic policy to promote mutual understanding and friendly and cooperative relationships with the nations of Asia and to contribute to the peace and prosperity of this region.

The maintenance and furtherance of friendly and cooperative relations with the Republic of Korea—which is Japan's closest neighbor—is part of the basis of Japanese foreign policy. The relations between the two countries have been developing since the normalization of diplomatic relations in 1965. It is expected that Japan-Korea relations will enter a new cooperative period as a result of various undertakings by both sides including joint development of energy resources in the continental shelf adjacent to the two countries .

The ASEAN nations are making steady progress in strengthening their resilience and regional solidarity. Japan welcomes these developments as a major contribution to peace and stability throughout Southeast Asia, and intends to continue its positive cooperation with the ASEAN nations and Burma in their own efforts for peace and prosperity.

Japan has maintained diplomatic relations with the Socialist Republic of Vietnam since 1976 when North and South Vietnam were re-unified. In 1976, diplomatic relations with Democratic Kampuchea were established, while the ties with Laos were preserved after the foundation of the Lao People's Democratic Republic in 1975.

For regional cooperation in Asia, Japan has been a member of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP; formerly ECAFE) since 1953, and made a significant contribution to the establishment of the Asian Development Bank in 1966. As of the end of 1981, Japan had made a total capital subscription of $1,368 million to the Bank, and in addition, a substantial contribution to the Bank's special funds. Japan has also made significant contributions to various regional cooperative institutions established under the auspices of the Ministerial Conference

for the Economic Development of Southeast Asia.

Promoting International Interchange

Hamonious Development of the World Economy

Japan realizes that, if a peaceful and affluent society is to be established throughout the world, there must be a much greater degree of international interchange of goods and capital, of science and technology, and of thought and ideas.

To date, Japan has been actively participating in various international organizations with the object of contributing to the development of a free and stable international economy.

In 1955, Japan joined the General Agreement on Tariffs and Trade (GATT). Later, in 1964, Japan became an Article 8 nation of the International Monetary Fund and a full member of the Organization for Economic Cooperation and Development (OECD). Japan took an active part in the so-called Kennedy Round negotiations in Geneva from 1964 to 1967 for the mutual lowering of tariff and non-tariff trade barriers.

At the GATT ministerial conference held in Tokyo in 1973, Japan played an active role in drafting the "Tokyo Declaration," adopted for opening a new round of multilateral trade negotiations to promote the further liberalization of world trade. Japan firmly believes that a free and open economic system should be the basis for the sound development of the world economy.

It has adopted a policy of successively easing import controls, and by April 1970 about 94 per cent of Japan's import trade had been liberalized. Since then, Japan has been continuing its efforts for the further opening of its market both unilaterally and through bilateral or multilateral negotiations in recognition that these moves enable the nation to fulfill its responsibilities as a major industrial nation in the world community.

The international economy has undergone changes under the impact of the oil problem and Japan, as an industrial nation which heavily depends on imports for important resources and food supplies, fully recognizes the interdependent nature of relations among nations.

In order to contribute to a harmonious development of the world economy as a whole, Japan has been making active efforts to promote cooperation with other countries through bilateral relations and through the United Nations, GATT, IMF, OECD, and other international forums, paying due attention to the need of coordinating its national economy with that of the world.

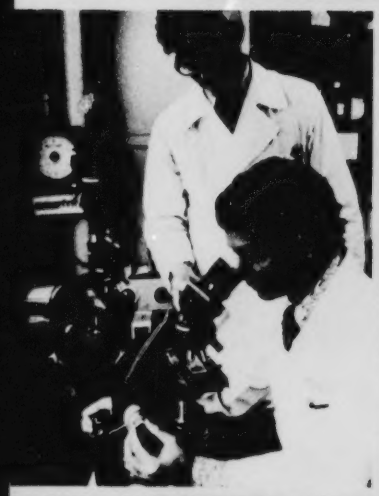
North-South Problem

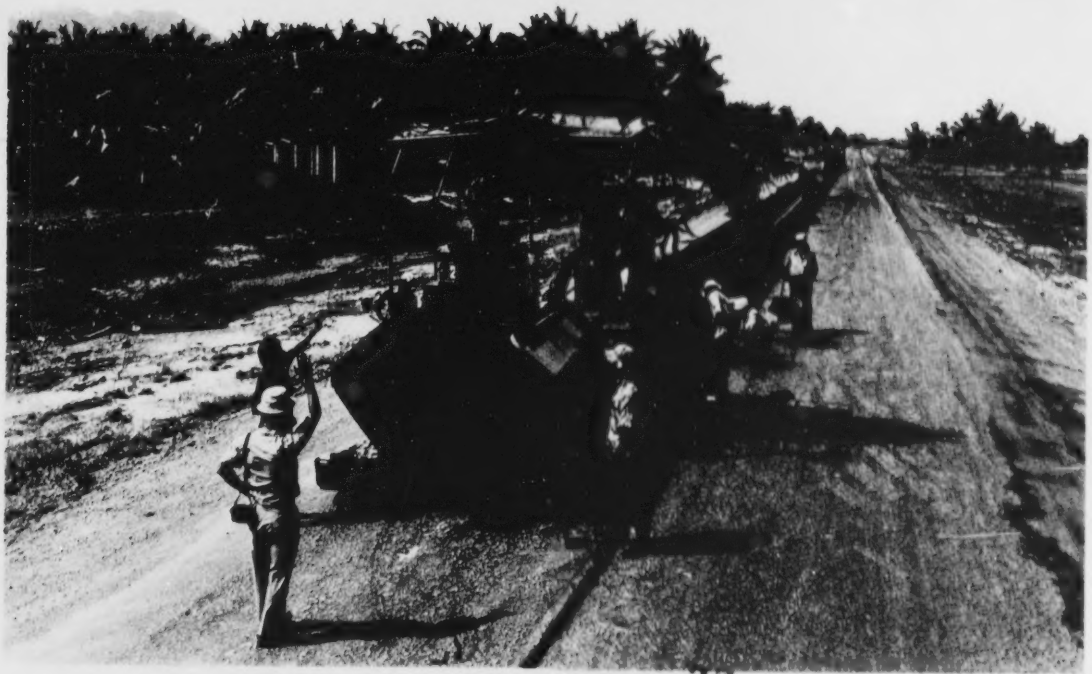
Japan enjoys broad interchange with the developing countries and is cooperating in various ways in their efforts for nation-building. The North-South problem represents one of the most important tasks facing the world today, and Japan fully realizes that cooperation with the developing nations is important for the harmonious growth of the world economy and the promotion of lasting peace.

Underdeveloped 100 years ago, Japan, with its own experience of development, is in a position to make a useful contribution to the developing countries in a manner befitting its capacities.

Through such forums as the Conference on International Economic Cooperation and the successive sessions of the United Nations Conference on Trade and Development, Japan has sought to contribute to the

(Top) Foreign trainees at a thermal power station in Japan.
(Center left) A medical student from abroad with a Japanese colleague; (right) young men and women from Southeast Asia visiting Japan under a Government exchange program.
(Below) Technical trainees from abroad at a telecommunications laboratory. ⇨





promotion of dialogue and cooperation between North and South.

During the past decade, Japan has been endeavoring to increase the total amount of its wide-ranging economic cooperation, especially its official development assistance, and expand technical cooperation with the developing nations, bearing in mind the importance of agricultural and social development.

Japan has also been positively approaching the problem of redressing its trade imbalances with some of the developing countries. In 1971, Japan, ahead of other countries, put the Generalized System of Preferences (GSP) into force for the benefit of the developing countries, thereby contributing to the expansion of their exports.

Cultural Interchange

To promote mutual understanding and friendship with all countries, Japan considers it essential to further expand its bilateral and multilateral interchange in the field of culture, such as fine arts, performing arts, education, science, and sports.

From this point of view, Japan has, as of June 1982, concluded cultural agreements with 20 countries and entered into cultural arrangements with nine countries. With a growing awareness in the country of the importance of cultural exchange, including the exchange of visits by leading figures in these fields, Japan established the Japan Foundation in 1972 to promote this kind of cultural exchange on a large scale.

As a nation which is preserving a unique cultural heritage from old, Japan has also achieved high standards in the various realms of modern culture and intends to contribute to the cultural enrichment of the world community through greater international interchange in these fields.

Problems Bearing on Mankind's Future

The world today is faced with major problems that have a bearing on the future of mankind, transcending differences in political ideology, economic system, and the stage of economic development.

Japan is devoting its efforts to promoting international cooperation in all fields of scientific and technological endeavor, including nuclear power, and space and ocean development, strictly from the standpoint of the peaceful utilization of such resources.

As a highly industrialized country, Japan is also determined to take an active and creative part in international efforts to relieve and remove the so-called problems of modern society, i.e., such global concerns as environmental disruption and urban congestion.

Economic Cooperation

With the increasing interdependence among nations, the future of the world depends heavily upon its harmonious development as a single community. As a country which is committed to peace and as the second largest free-market economy in the world, Japan is fully committed to its role in fulfilling the responsibility of the more advanced countries to assist the developing countries and has been making every effort to increase its economic cooperation to contribute to the solution of the North-South problem.

The Development Assistance Committee (DAC) of the Organization for Economic Cooperation and Development (OECD) classifies the total flows of economic cooperation into three categories: official development assistance (ODA), other official flows (OOF), and private flows (PF). In 1980, each of these categories accounted for 49 per cent ($3,304 million), 22 per cent

⇦ *(Top left) Students of a fisheries training institute in Sri Lanka with a visiting Japanese specialist; (right) technical trainees from abroad at a vocatinal training institute south of Tokyo.*
(Below) A national highway in Thailand being constructed with technical cooperation from Japan.

DAC Major Countries' ODA Net Disbursements
(billion US dollars, %)

	1965	1973	1977	1978	1979	1980
Japan	0.2 (0.27)	1.0 (0.25)	1.4 (0.21)	2.2 (0.23)	2.6 (0.26)	3.3 (0.32)
U.S.A.	3.4 (0.49)	3.0 (0.23)	4.7 (0.25)	5.7 (0.27)	4.7 (0.20)	7.1 (0.27)
France	0.8 (0.76)	1.5 (0.57)	2.3 (0.60)	2.7 (0.57)	3.4 (0.59)	4.0 (0.62)
F.R.G.	0.5 (0.40)	1.1 (0.32)	1.7 (0.33)	2.4 (0.37)	3.4 (0.44)	3.5 (0.43)
U.K.	0.5 (0.47)	0.6 (0.34)	1.1 (0.45)	1.5 (0.47)	2.1 (0.52)	1.8 (0.34)
DAC	5.9 (0.44)	9.4 (0.30)	15.7 (0.33)	20.0 (0.35)	22.4 (0.35)	26.7 (0.37)

Note: The figures in parenthesis show the ODA/GNP ratio.

($1,478 million) and 29 per cent ($1,957 million), respectively, of Japan's total economic cooperation of $6,776 million.

Japan considers ODA to be the most important form of economic cooperation. In 1980, Japan's net disbursements of ODA amounted to $3,304 million, representing an increase of 25.3 per cent over the previous year's $2,638 million. Japan's share of the total ODA among the 17 DAC member countries ($26,719 million) amounted to 12.4 per cent in 1980, the fourth highest among them, following the United States, France, and the Federal Republic of Germany. As for its ODA/GNP ratio, it reached the level of 0.32 per cent in 1980, showing a substantial increase from the previous year's 0.26 per cent. Yet, with the DAC average being 0.37 per cent in 1980, further efforts to raise its level are expected.

Regarding the effort to increase ODA in the future, Prime Minister Zenko Suzuki announced to the Diet in January 1981 the Government's intention of achieving the "New Medium-Term Target." According to this new medium-term target, Japan will endeavor to further increase the ratio of ODA to GNP and strive to more than double the aggregate ODA disbursed in the last five years through 1980 (about $10.7 billion) in the next five years starting with 1981. The necessary measures to achieve this goal will be taken including, among others, increasing the nationl budget related to ODA.

In addition to quantitative expansion, the qualitative improvement of ODA is important and necessary. Japan intends to make the utmost effort to improve the quality of ODA by increasing the share of grants. For the purpose, Japan will expand its grant capital assistance and technical cooperation.

With respect to the geographical distribution of Japan's bilateral ODA, an analysis of recent disbursement figures shows that about 70 per cent of total bilateral ODA went to Asian countries (nearly half of the amount to ASEAN countries). The remaining 30 per cent is approximately equally allocated among Middle Eastern, African, and Latin American regions. Japan applies two standards in allocating its bilateral ODA: the degree of economic and political interdependence of Japan with the recipient country and humanitarian considerations. These standards correspond to the internationally acknowledged philosophy on assistance. In allocating ODA, Japan, as a member of the Western community of industrialized countries, also pays attention to intensifying aid to the so-called "countries bordering conflicts" such as Thailand, Pakistan and Turkey. Aid to other countries in the "areas which are important for the maintenance of the peace and security of the world" is also given equal emphasis.

When the Government formulates the policy for the actual implementation of economic cooperation, greater priority is placed on those sectors which directly contribute to higher living standards for the people in the developing countries. In visiting the five ASEAN countries in January 1981, Prime Minister Suzuki announced that the Government would place emphasis on such sectors as rural and agricultural development, energy developments, human resources development, and the promotion of small and medium-scale industries. The infrastructure sector is also emphasized in official loans while the sector usually known as BHN (Basic Human Needs) receives more emphasis in grant capital assistance and technical cooperation. Japan also stresses the humanitarian point of view, and thus

aid to refugees.

One area on which Japan must place special effort is "technical cooperation," which cannot be realized without direct human contacts through the exchange of people. The share of technical cooperation in Japan's ODA was 8.4 per cent in 1980, compared to the DAC average of 20.8 per cent in the same year.

The significance of technical cooperation is twofold. Firstly, it carries out the transfer of technical skills and technology. This means the actual development of human resources, which is indispensable for the economic and social development of any developing country.

Secondly, through the direct exchange of people, technical cooperation provides valuable opportunities for direct human contacts. In FY 1980, 3,371 people from overseas visited or stayed in Japan for training and learning; and 4,783 experts were sent from Japan to developing countries to assist in projects and the transfer of technology.

Lack of understanding between the peoples of different countries has often resulted in friction, and more seriously, wars between countries. In this sense, technical cooperation has a definite role to play in laying the foundations for mutual understanding between peoples of different countries through direct human contacts.

The "development of human resources" is the important element of technical cooperation. In this connection, Prime Minister Suzuki announced, during his visit to the ASEAN countries in January 1981, the idea of an "ASEAN Human Resources Development Center," which calls for the establishment of a center in each of the ASEAN countries and also one center in Okinawa to act as liaison for the exchange of people and vocational training.

DEFENSE

The maintenance of Japan's national defense is based upon two elements: the Self-Defense Forces and the collective security system with the United States. The security system was initiated in 1951 with the Security Treaty between Japan and the United States of America, concluded at the time of the signing of the San Francisco Peace Treaty. The present system exists under the terms of the Treaty of Mutual Cooperation and Security between Japan and the United States of America, concluded in 1960, which supplants the earlier pact. This Treaty provides, among others, for the stationing of U.S. military forces within Japan "for the purpose of contributing to the security of Japan and the maintenance of international peace and security in the Far East."

Prior to 1950, Japan was totally without arms, and its security, both internal and external, rested wholly with the occupying forces of the Allied Powers, the majority of which were from the United States. The outbreak of hostilities in Korea created a serious security vacuum in Japan when the American forces stationed in Japan were sent to the war theater. On the initiative of the occupying powers, it was decided that the Japanese should assume part of the responsibility for their internal security.

Accordingly, in July 1950, the Supreme Commander for the Allied Powers in Tokyo instructed the Japanese Government to set up a National Police Reserve of 75,000 men and to increase the strength of the Maritime Safety Agency—approximately equivalent to a coastguard force—to 18,000 men. These became the embryo of what are today the Self-Defense Forces.

With the establishment of the mutual security system with the United States in 1951, Japan's defense capability was steadily enhanced. The Police Reserve and the Maritime Safety Security Force were transformed into the Ground Self-Defense Force and the Maritime Self-Defense Force, respectively, and the Air Self-Defense Force and the Defense Agency were newly established. In July 1956, the National Defense Council was organized to act as the highest advisory group available to the Prime Minister on matters relating to the nation's defense policy.

As a result of successive buildup pro-

grams, the Self-Defense Forces, as of March 1982, had a total of 242,762 uniformed personnel in its three services. The breakdown was as follows:

Joint Chiefs of Staff: 83 uniformed personnel.

Ground Self-Defense Force: 155,314 uniformed personnel and 41,000 uniformed reserve personnel. The GSDF is organized in five armies, 13 divisions, and has about 360 combat aircraft besides missile launchers of HAWK SAM groups.

Maritime Self-Defense Force: 42,455 uniformed personnel with 163 ships and about 190 combat aircraft.

Air Self-Defense Force: 44,910 uniformed personnel. The ASDF has about 360 combat aircraft, including F-104Js, F-4EJs, and F-15s, as well as missile launchers of NIKE groups which are controlled by the BADGE (base air defense ground environment) system.

Defense expenditures in fiscal 1982 amounted to $11,293 million, ranking Japan fifth among the industrialized democracies. (It was 0.93 per cent of GNP, and 5.2 per cent of the General Account of the National Budget.)

In treaty arrangements with the United States and its own defense preparations, a factor that is constantly borne in mind is the limitations presented by the war renunciation clause of the Constitution. The Supreme Court ruled in 1959 that the Constitution presented no impediment to the exercise of Japan's inherent right to defend itself against aggression. A corollary of this is that both in its treaty and its own defense arrangements, Japan's preparations are limited to purely defensive measures.

The Security Treaty with the United States expressly states that it will be implemented within the constitutional limitations presented by the war-renunciation clause. The Air Self-Defense Force, for example, has no long-range bombers, and the Maritime Self-Defense Force has no combat ship bigger than a destroyer. It is also basic policy that the Self-Defense Forces shall not be sent overseas.

COMPARISONS OF DEFENSE EXPENDITURES (Unit: $ million)

Country	$ million			% of government spending			% of GNP	
	1975	1980	1981	1975	1980	1981	1975	1980
1. Soviet Union	124,000	n.a.	n.a.	n.a.	n.a.	n.a.	12–14%	
2. United States	88,983	142,700	171,023	23.8	23.3	23.7	5.9	5.5
3. China	n.a.	56,941	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4. Britain	11,118	24,448	28,660	11.6	12.3	12.3	4.9	5.1
5. Saudi Arabia	6,771	20,704	27,695	20.0	28.1	31.0	18.0	n.a.
6. France	13,984	20,220	26,008	20.2	20.3	20.5	3.9	3.9
7. Germany, F.R.	16,142	25,120	25,000	24.4	22.2	22.6	3.7	3.2
8. Japan	4,620	8,960	11,497	6.6	4.7	5.0	0.9	0.9
9. Italy	4,700	6,580	8,887	9.7	n.a.	5.1	2.6	2.4
10. Israel	3,552	5,200	7,310	50.1	32.0	30.6	35.9	23.2

Source: "The Military Balance, 1981-1982" published by the International Institute for Strategic Studies, London.

(Top) F-15 fighters of the ASDF (left) and T-2 trainer of the ASDF (right).
(Center left) Type-74 tank of the GSDF; (right) GSDF personnel on Airborne operation.
(Below) Destroyers of the MSDF.

ECONOMY

POSTWAR DEVELOPMENT

The economy of Japan is a thriving complex of industry, commerce, finance, agriculture, and all the other elements of a modern economic structure. The nation's economy is in an advanced stage of industrialization, served by a massive flow of information and highly developed transportation networks.

One feature of Japan's economy is the major contribution of the manufacturing industry and the service trades, such as transport, wholesale and retail trades, and banking, to the country's net domestic product, in which such primary industries as agriculture and fisheries now have a minor share. Another is the relative importance of international trade to Japan's economy.

Japan is a small island country, poorly endowed with natural resources and supporting a large population of 118 million. Yet despite these limiting conditions and the devastation of its industrial structure during World War II, Japan has managed not only to rebuild its economy but to become one of the leading industrial nations in the world today. At the same time, however, this process of rapid industrial expansion as well as the changing domestic and international economic environments of the past few years have given rise to various economic problems that the nation must now face.

(Top) Outside-view of International Trade Fair exhibition hall in Tokyo;
(Below left) International Machine Tool Fair in 1980; (right) visitors study new model machine tools.

Postwar Recovery

For some years after the nation's defeat in World War II, the Japanese economy was almost totally paralyzed from wartime destruction, experiencing a severe food shortage, runaway inflation, and rampant black-marketeering. The nation had lost all of its overseas territories while its population soared beyond the 80 million mark with the addition of some six million repatriates from abroad. Factories had been burnt down by air raids. Domestic demand dropped with the halt of military procurements, and overseas trade was restricted by the Allied Occupation Forces. But the Japanese people set about rebuilding their war-devastated economy, assisted initially by rehabilitation aid from the United States. By 1951, the gross national product was back to the 1934-36 level. Population growth inhibited the recovery of the nation's per capital income, but by 1954 it also had regained its 1934-36 level in real terms.

Demobilized military personnel and returning civilians joined the labor force, more than adequately meeting the manpower requirements for economic reconstruction in the early postwar period.

Worth noting is the fact that various social reforms carried out after the war helped shape a basic framework for subsequent economic development. The postwar demilitarization and legal constraints against arms buildup under the war-renunciation clause of the new Constitution eliminated the heavy prewar drain on the nation's economic resources. While the break-up of the *zaibatsu* (large business trusts) set loose the forces of free competition, the ownership of farmland was redistributed on a wholesale basis among former tenant farmers, giving

them fresh incentives for improving their lot. Barriers were also removed to labor union activities, with the result that worker's job security became better protected and the way opened for a steady rise in wage levels.

Under what was termed the "priority production system," stress was placed on increased coal production and expanded steel output, the two main focuses of the nation's industrial endeavor. With steel production on an upswing, the foundation was laid for a takeoff of production in general, which was marked by a surge in plant and equipment investment sustained by recovering consumption. Production then came to grow strongly not only in the key material industries, such as steel and chemicals, but also in such new consumption industries as television sets and automobiles.

High Economic Growth

Japan's economy continued to expand from the mid-1950s through the 1960s. The annual growth rate registered close to 11 per cent in real terms for the decade of the 1960s. This compared with 4.6 per cent for the Federal Reprblic of Germany and 4.3 per cent for the United States in the 1960–1972 period. (The Japanese postwar growth rate was more than double the average prewar growth of about 4 per cent a year.)

It is generally agreed that the rapid growth of Japan's economy from the late 1950s through the 1960s was powered by vigorous investment by private industries in new plant and equipment. The upsurge in new capital spending was associated with the introduction of new technology, often licensed foreign know-how. Investment for modernization made Japanese industries more competitive on the world market, created new products, and brought Japanese enterprises the benefits of mass production and improved productivity per worker.

Heavy investment in the private sector was maintained partly through the high level of savings of Japanese households, which provided banks and other financial institutions more than adequate funds to be channeled to private industries.

Another factor behind the Japanese economic growth in those years was the availability of an abundant high quality labor force. Up to 1960 at least, there had been sufficiently large additions of young workers to the labor force. And this was reinforced by a heavy movement of labor from the primary industries in the countryside to the manufacturing and service industries located mostly in the larger cities.

As best exemplified in the "Income-Doubling Plan" of 1960, the Govemment's economic policies at the time were geared to the encouragement of savings, stimulation of investment, protection of growth industries, and promotion of overseas trade. At the same time, Japan was favored by an expansionary world economic climate throughout this period. Requisite energy and industrial raw materials were also supplied to Japan in abundant quantities and at relatively low costs.

After a short recession in 1965, the Japanese economy enjoyed a long period of prosperity until around the summer of 1970, with the average growth rate during this period reaching 11.8 per cent. The main factor behind this expansion of the economy was rising plant and equipment investment, which took the form of more active large-scale investment designed to bring about economies of scale, an increase in investment directed toward exports, and capital investment made in response to changes in the economic and social environments, such as investment in labor-saving devices and pollution prevention equipment. Also supporting the sustained rise in business activity were increases in exports due to the stronger price competitiveness of Japanese export commodities.

Economy at the Crossroads

With the rapid growth of the nation's economy and the fast-rising gross national product, by 1968 Japan had come to rank second only to the United States among the free market economies in terms of national

economic scale.

However, the fast growth of the national economy brought forth various problems and imbalances: a relative delay in modernizing such areas as agriculture and smaller businesses; a sustained upward trend in consumer prices; a shortage of social overhead capital, such as housing, roads, and other facilities of the living environment; environmental pollution and the destruction of nature; and overcrowding in the cities accompanied by a depopulation trend in rural areas.

On the international front, this long-term prosperity rapidly boosted Japan's international standing; however, the rapid increase in Japan's exports and growing surplus in its international balance of payments led to friction with other countries in the form of increased moves toward protectionism and import restrictions. Changes in the international and domestic environments surrounding the Japanese economy that had accumulated internally during the latter half of the 1960s suddenly surfaced in the period from 1970 to 1975. In connection with the international currency system, the U.S. announced the suspension of the dollar's convertibility into gold on August 16, 1971, in effect bringing an end to the Bretton Woods system, which had been the basic framework for the economic development of the free world since World War II. In February 1973, the world's major countries switched to the floating exchange rate system, and Japan too revalued the yen upward and shifted to the floating system. Such drastic change in the international currency system and the trial-and-error adjustment of the world's currencies in relation to one another resulted in a worldwide inflation.

Moreover, with the momentum provided by the oil crisis in late 1973, a new, spiraling inflation broke out on a global scale, and in the process of combating it, a surge of economic recession spread throughout the world. For a time, Japan was faced with an extremely severe economic climate of simultaneous recession and inflation.

At the level of household finance, the perception of consumption as a virtue faded, the pattern of thrift and economy grew rapidly, and the propensity to save rose abnormally. This rise in the propensity to save was due both to an increase in savings for old age brought on by the rapidly aging population structure and to the tendency to save in response to uncertainties caused by the rampant price increases during the oil crisis. In the domestic economy, full employment had finally been attained for the first time since the war; however, unemloyment began to create a problem, especially from 1977 on. As for the inflation, both wholesale and consumer prices stabilized from 1976 on, bringing inflation almost under control.

Under these circumstances and as an outcome of the prolonged recession and heightened concern for environmental conservation, Japan has shifted its economic policy from one for rapid expansion to one aiming at a slower but more stable growth of the national economy, with more attention being paid to the broader problem of the quality of life.

PRESENT STATUS

Production

In 1980, Japan's gross national product (GNP) was $1,043.7 billion, the nation's economy thus remaining the second largest among the free market economies. Per capita national income stood at $7,190 in 1980 compared with $11,762 of the Federal Republic of Germany, $10,273 of the United States, $10,824 of France and $8,253 of the United Kingdom.

During the 1960s and early 1970s, rising income and demand called forth stepped-up investments in modern industries, which in turn spurred the economy's further growth.

Japan's crude steel output, for instance,

reached a peak of 119 million metric tons in 1973 before dropping slightly to 112 million tons in 1980. This gave Japan the world's third largest crude steel output after those of the Soviet Union and the United States.

The same goes for automobile production. Japan's passenger car output reached 7.04 million units in 1980 and Japan exceeded the United States in the production of passenger cars.

In fact, Japan has achieved either the world's second or third highest levels of production in many of the key manufacturing industries, among them being cement, aluminum, synthetic rubber, and plastics. It also continues to lead the world in the production of television sets and other consumer electronics and remains the world's number one shipbuilder.

These production levels indicate a high level of plant and equipmint investment for advanced technology and efficient production processes, which in turn have contributed in large measure to Japan's generally high labor productivity in major manufacturing industries. For instance, Japan's labor productivity increased 42 per cent between 1975 and 1980, a figure considerably larger than those in other major industrialized countries (the comparable increase in the United States, for instance, was 15 per cent). The 1981 White Paper on Labor made a comparison of U.S. and Japanese per capita production levels in 1977 for some major industries. Taking the U.S. level as 100, Japanese levels were as follows: foodstuffs, 42.3; textiles, 87.4; chemical products, 69.7; iron and steel, 210.1; electronic machinery, 136.1; and motor vehicles, 137.6.

An expansion of productive power of this magnitude inevitably entailed far-reaching changes in the economy's industrial structure. As is the case with other societies at an advanced stage of industrialization, such changes are most dramatically expressed in the form of the sharply reduced weight of primary industries – agriculture, forestry and fishery – in the total national production. The share of the primary industries in the nation's output of goods and services shrank from 22.3 per cent in 1954 to 3.8 per cent in 1980. This was because the output of secondary industries – manufacturing, construction, and mining – and service industries, such as retail trade, finance, insurance, transport, and electrical power, grew much more rapidly than that of primary industries. Within the manufacturing sector itself, the importance of textiles and other traditional light industries was eclipsed by a vigorous expansion in the production of heavy and chemical industries.

The structure of Japanese industries can also be observed in the distribution of the working population, including both employed workers and self-employed persons, among these three sectors. Those working in the primary sector of agriculture, forestry and fishery still accounted for a high 37.5 per cent of the working population in 1955, but this figure fell steeply in the following two decades to 10.4 per cent in 1980. Meanwhile, those employed in the secondary sector rose from 24.4 per cent of the working population in 1955 to 34.8 per cent in 1980.

By far, the most significant shift in the working population has taken place in tertiary industries – the service sector. By 1980, more than half of the nation's total working population, or 54.6 per cent, had been drawn to the service sector, compared with 38.1 per cent for 1955. This is an indication that Japan, too, is evolving into a service-oriented economy, a structural change already seen in the U.S. and other industrially advanced economies.

High Growth

High growth brought its reward to Japanese workers. The economic upsurge of the 1960s and early 1970s heightened the demand for labor and led to sustained large-scale wage increases.

The average monthly wage for employees of manufacturing industries was ¥244,571 (about $1079) in 1980.

According to the Ministry of Labor, the hourly wage of Japanese production-line workers in manufacturing (with 30 employees or more) was ¥1,023 ($4.5) in 1980.

Corresponding figures for workers in some of the other industrialized countries for 1980 were as follows:

Hourly Wage of Production-line Workers
(Manufacturing Industries: 1980)

		Differentials in terms of 100 for Japan
Japan	¥1023	100
United States	$7.27	101.5
F.R.G.	DM13.10	102.4
France	Fr.18.46	62
Canada	CAN.$8.19	98.6

Average Number of Working Hours per Week
(Manufacturing Industries: 1980)

Japan	40.9
Canada	38.5
United States	39.7
U.K.	41.9
France	40.6
F.R.G.	41.6

Source: ILO

Labor Force

Japan's total labor force (working population plus totally unemployed persons) in 1980 numbered 56.5 million out of a working age population of 88.9 million (those aged 15 and over). The nation's labor force showed a marked increase in the latter half of the 1950s, but this growth slowed from the mid-1960s onward. This was due first to the rising proportion of the elderly population and second to the fact that a greater number of young people were going on to upper secondary schools and institutions of higher learning. Thus the advantage Japan had enjoyed in having an abundant labor supply was gradually lost even in those years of economic boom.

The strong demand for labor generated by high economic growth and the dwindling rate of new additions tc the working population combined to create a tight labor market from the second half of the 1960s into the early 1970s. The rate of the totally unemployed fell from about 2.5 per cent of the total labor force in 1955 and 1.7 per cent in 1960 to 1.1–1.4 per cent in 1970-74. After 1967, there were always more job openings than the number of people seeking jobs.

This strained labor supply-demand balance was reversed during the severe economic slump that struck Japan in 1974. In 1980, the number of people registered as being totally unempoyed reached 1.14 million, 2.0 per cent of the working population. With the recovery of the economy, however, employment has been showing gradual improvement.

Investment and Savings

The Japanese people even today follow a tradition of thrift with the result that the average personal savings amount to somewhat over 20 per cent of their income. These savings are funneled through the banks to private enterprises, enabling Japanese industries to invest without relying too much upon borrowings from abroad. As a result of this pattern of borrowings for equipment investment, the capital composition of Japanese enterprises is marked by the preponderance of borrowed capital. Owned capital accounts, on the average, for only about 20 per cent of total capital today, compared with 30 per cent in the Federal Republic of Germany and 54 per cent in the United States.

For Japanese firms, increasing the ratio of owned capital thus remains an important task for the future.

Technological Innovation

In the late 1950s and throughout the 1960s, a notable sophistication of Japan's industrial structure was brought about through the elevation of labor productivity in those sectors where foreign technology was avidly introduced and new domestic

technology steadily developed. This development in turn stimulated further plant and equipment investment, thus providing a major impetus to the rapid economic growth.

During this process, technological interchange between Japan's large corporations and smaller businesses grew rapidly, while on the international front Japan gradually began to export its own technological developments to other nations.

In fiscal 1980, payments of royalties for imported technology amounted to $1.06 billion, while exports of Japanese technology were valued at $704 millon. The ratio of technology exports to imports was 0.67 with the corresponding figures being 9.49 for the United States (1979), 1.43 for France (1977), 1.02 for Great Britain (1975), and 0.46 for Federal Republic of Germany (1979).

Against the background of the recent prolonged recession and increased industrial competition both at home and abroad technological innovation and equipment investment aimed at economizing on labor and promoting automation have continued to make steady progress, especially in such industries as chemicals, iron and steel, electrical machinery, transport machinery, and non-ferrous metals.

Dependence on Trade of Various Nations

(% of GNP) (1980)

Country	Exports (%)	Imports (%)
Japan 1978	10.0	8.2
1979	10.2	11.0
1980	12.4	13.5
France	17.5(1979)	18.6(1979)
Germany, F.R.	23.3	22.7
Italy	19.7	25.3
United Kingdom	22.2	23.1
Belgium	54.3	60.3
Sweden	27.4(1979)	28.5(1979)
Switzerland	28.0	34.4
Canada	27.4	25.4
U.S.A.	8.4	9.6
Indonesia	33.0	16.3
Thailand	20.2	28.6
Philippines	16.3	23.6
Malaysia	56.8	47.4
Singapore	159.1(1979)	197.2(1979)
Korea, Rep. of	30.4	38.7
New Zealand	23.8	24.0
Australia	16.0	16.3

Source: IMF "International Financial Statistics"

External Trade

Japan's external trade has continued to register smooth growth against a background of expanding world commodity exchanges based upon the principle of free trade.

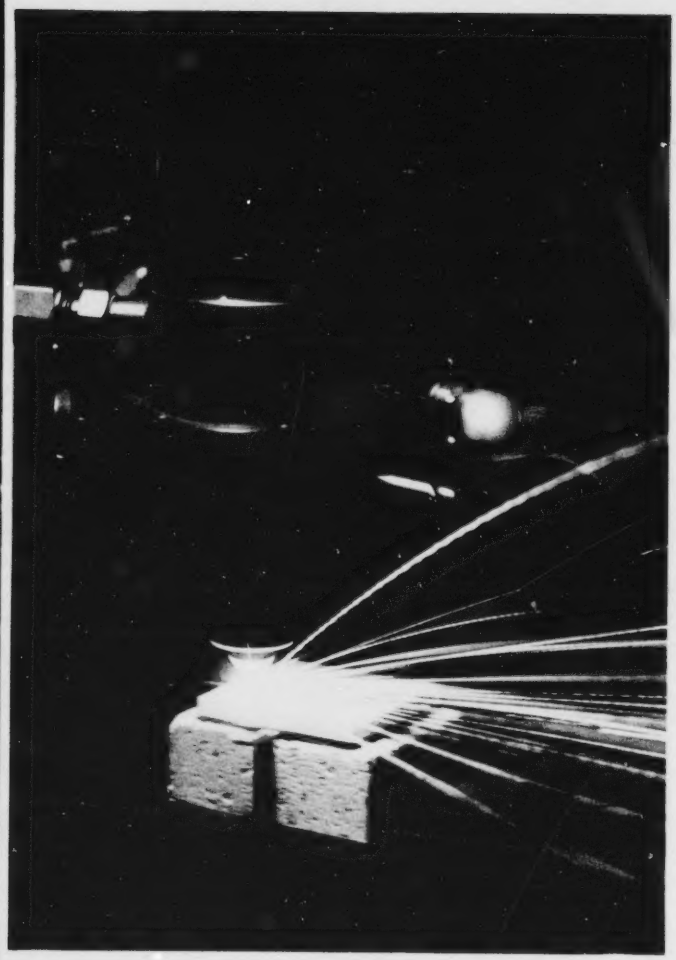
The volume of exports rose 7 times during the ten-year period from 1971 to 1980. In 1980, exports totaled $129.8 billion, or 7.1 per cent of total world exports excluding the Communist countries. Japan's ratio of exports to GNP was 12.4 per cent in 1980, showing a much lower rate in its dependence on exports than corresponding rates in other nations except the United States.

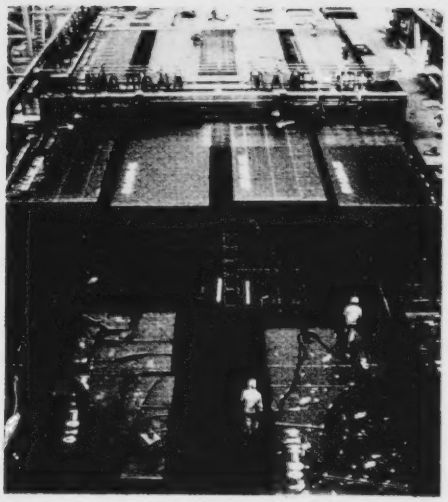
The nation's imports have followed a similar pattern of steady growth. From a 1971 figure of $19.7 billion, imports surged over sevenfold to reach $140.5 billion in 1980, representing 7.6 per cent of total imports among the world's free economies for that year. This increase indicates a notable expansion in Japan's domestic market for consumer and industrial products as well as for raw materials.

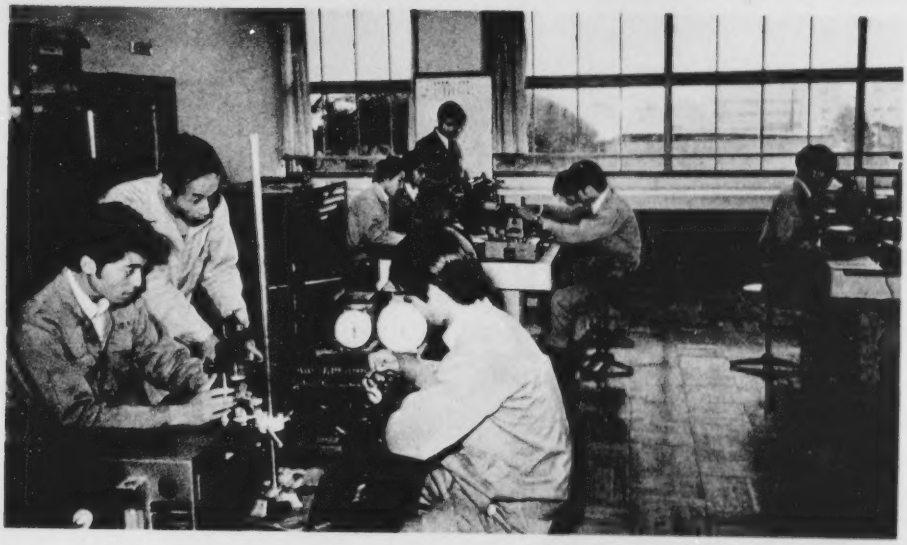
Japan's changing industrial structure over the past decades has been reflected in the nation's external trade as well.

Light industrial products still accounted for about half of Japan's export value in the early 1950s. By 1965, however, the proportion of heavy industrial products had increased to 61 per cent of the total export value, and this rose further to about 84.4

(Top left) Metal plate being cut by a laser ray. (right) automated cutting of steel plates at a shipyard. (Below) Steel mill complex being built on reclaimed land. ⇨







per cent in 1980.

The change in import trade composition also is indicative of how the economy has changed. The importance of such goods as food and machinery, major imports in the immediate postwar years, has diminished. Instead, raw materials for industrial use and mineral fuels now account for as much as 66.7 per cent (1980) of Japan's total imports. At present, Japan is one of the largest importers of raw materials in the world.

Balance of Payments

The shifts in the economy can also be seen in the country's changing balance of payments position.

From the end of World War II until about 1960, there was basic and sometimes very large deficits in the trade account, generally offset by the inflow of economic assistance and other capital. This deficit grew in times of economic recovery and at the early state of industrial growth due to the rapid expansion of imports without a compensating expansion of exports, thereby restraining sustained economic growth.

As the economy steadily strengthened its competitive position in the world market in the 1960s, the trade balance gradually improved, lifting what was then known as the "balance of payments constraint" from the economy. At the same time, the undesirable restraints on capital flows began to be eased, as Japan started moving to open its economy.

The 1973 oil crisis, however, basically disrupted the generally favorable balance of payments structure at that time. With the cost of oil imports running at three times what it had previously been, both the current balance and the overall balance fell into a temporary deficit. Then exports began rising substantially while imports remained sluggish as a result of the prolonged recession at home, and the balance of payments registered fairly large surpluses in 1977 and 1978. Since 1978, however, imports have shown a steady increase as a result of the recovery in domestic demand and the positive measures taken by the Government to promote imports. This growing volume of imports, plus the huge increase in the cost of oil due to the oil price hike in June 1979 produced a deficit in the current balance in the latter half of 1979.

Japan's foreign exchange reserves, after lingering below the $2.0 billion level in the 1960s, began swelling later in the decade as exports expanded, reaching $13.5 billon at the end of 1974. The total holdings after dropping off temporarily in 1975, again climbed steadily, reaching $33 billion at the end of 1978, but began declining from February 1979 and stood at $25 billion at the end of 1980.

The departure from the postwar exchange rate of ¥360 to the US dollar dates back to December 1971; the switch to the floating exchange rate system followed in February 1973. Since then the exchange value of the yen has been fluctuating mainly in line with the balance of payments position. It reached as high as ¥176 to the dollar in October 1978, but has since come down gradually to around ¥226 in January 1982.

Future Change

After the oil crisis, industries relying greatly on fuels and raw materials imported from abroad became oppressed with increased costs and lowered profits. The materials industry, which depends mainly on investments for plant and equipment, also suffered setbacks due to slackening economic growth and changes in the demand structure. That is, a supply capacity on a smaller scale than in the past has become sufficient, the supply capacity being something which should correspond to the low

(Top) Practical work at a technical high school. (Center left) A technical team studying refinements on a rotary engine; (right) drafting studio of an electric appliance company.
(Below) Spot checks by police serve to enforce Japan's strict standards for auto gas emissions.

growth rate accompanying the transition from high growth to moderate growth.

Japan's economy, which up until the present had been guided by investment, has come to witness declines in investment, and recession in the capital goods sector, including the iron and steel industry, is pronounced. There are also the low-value-added industries, which are feeling the effects of the advancing semi-developed countries. On the other hand, amid these changing conditions, the consumption-related and export-related high-added-value industries and tertiary industries and recently the public-works-related industries are becoming promising.

Japan's past industrial development has been characterized by a steady drop in the weight of labor-intensive industries, such as textiles and sundries, against a remarkable growth of capital-intensive industries such as chemicals, steel, and machinery. Japanese exports have become more heavy-industry oriented, and much of the total export volume has been produced in high resource-consuming industries with a low "knowledge-intensive" character.

With its limited land and mineral resources, Japan will now have to expand its output of "knowledge-intensive" products instead of resource-consuming ones. It is already becoming increasingly difficult for Japan to raise its output of chemicals and steel, for instance, because of higher costs of energy as well as environmental problems, while machinery is expected to account for a large share of Japan's industrial output and exports.

From the aspect of internal competitiveness as well, the comparative advantage can be seen to be shifting from the high resource-consuming industries to the knowledge-intensive industries owing to the steep rise in the price of petroleum in recent years.

The structure of imports, on the other hand, has been shifting toward more labor-intensive items, though the weight of such products in total imports still remains low. Further industrial development in neighboring Asian countries will stimulate such a shift in Japanese imports. But new measures to realign domestic conditions will be required to speed the process of further change in this direction.

For the future expansion of the nation's food supply capacity, agriculture will have to raise its productivity and profit rate. Diversified farming, both in crop farming and animal husbandry, is considered one possible solution to a sound development of Japan's agriculture in the future.

Expansion of the scale of operation by means of lease and trust of agricultural land is considered another way to increase farming productivity. The high-saving, high-investment type of growth up to the present has induced more demand for goods than services. In the future, the likely change in the economic structure, in which a higher portion of resources will be directed to personal consumption, housing, recreation, and public expenditures, will induce a greater supply of more services than in the past.

NATURAL RESOURCES

Agriculture

During Japan's postwar period of rapid industrial growth, the nation's agricultural sector underwent vast and far-reaching changes. The process is continuing, bringing about significant improvement affecting the well-being of the farming community as well as the national economy as a whole. At the same time, however, changes have created new problems and difficulties requiring constant review and attention.

Japan was once well-known for the large number of farmers in its total population. In fact, the farm labor force accounted for 50 to 60 per cent of the total working population before World War II. Even after the war, the ratio was around 40 per cent for some time, but from the latter half of the 1950s, a population exodus from the coun-

try to the urban areas gathered momentum in response to an increased demand for labor by the rapidly expanding industrial sector.

The total population of farm-households diminished from 37 million in 1955 to 21.4 million in 1980, which represented 18.3 per cent of the total population. The proportion of the farm labor force in Japan's total working population also decreased from 23 per cent in 1963 to 19.4 per cent in 1966, dipping below the 20 per cent mark for the first time, and stood at 10.4 per cent, or 5.8 million in 1980. Moreover, the key agricultural labor force, that is, the 20-to-39-year-old group and particularly the male farmer, has drastically decreased.

Owing to the country's mountainous topography, arable land is extremely limited. Only 14.3 per cent, or about 5.4 million hectares, of the total area represents agricultural land, of which paddy fields occupy 55.9 per cent.

Farming plots are intensively cultivated and all available land is put under crops. Terrace farming is widely practiced to bring even hills and small mountains under cultivation.

The small size of Japanese farms once made it difficult to use tractors and other large farm machines, except in Hokkaido where arable land per farm is more plentiful. The rapid development of mechanized farm implements, however, has helped alleviate this drawback and the diffusion rates of power tillers and tractors stood at 90, respectively, per 100 farm-households in 1980.

The average annual increase or decrease rate of rice yield per hectare has been hovering around 1.0 per cent in recent years (between 1971 and 1979), and decreased by 15 per cent in 1980 because of bad weather conditions. The average yield per hectare stood at 4.1 tons for 1980.

In contrast with the rapid reduction of the agricultural population, the number of farm-households decreased only slightly from 6 million in 1960 to 4.7 million in 1980, of which only 13.4 per cent were entirely dependent on agriculture for their livelihood, while 21.5 per cent had members holding part-time jobs in the manufacturing or service industries and 65.1 per cent primarily relied on non-agricultural industries. The ratio of agricultural income to total farm-household income decreased from 55 per cent in 1960 to 26.7 per cent in 1980.

However, the rise in the income of individual farmers, accompanied by a rapid improvement in living standards, has been remarkable in recent years. Annual income per farming household has already surpassed the income level of urban households centering on wage earners. In 1980, the annual income per farm household (¥4.5 million) was 7.6 per cent more than the national per household average income for workers (¥4.2 million). The index of income per farm-household was 340 in 1970 and 1,109 in 1980 in nominal terms with the base of 1960 as 100.

Partly responsible for this rise in income is the special Staple Food Control System by which the Government promises the farmers to buy most of the harvested rice, making the price level of rice in Japan much higher than in most other countries.

As for the size of farms, the average holding of arable land was 1.17 hectare in 1980. Farm households under one hectare decreased in number, but still represented 71 per cent of the total in 1980.

As in many other Asian countries, rice production occupies the greater part of agriculture in Japan. It accounted in value for 33.7 per cent of all agricultural produce in 1980. Land improvement, advanced techniques, improved strains and the heavy use of chemical fertilizers and various pesticides make Japanese farms among the most productive in the world.

Rice production continued to increase after the war until the late 1960s when Japan's rice harvests were so consistently bountiful that a yield of 14 million tons became to be regarded as normal. Rice output amounted to a record 14,453,000 tons in 1967 and 14,449,000 tons in 1968.

Meanwhile, the nation's demand for food became more diversified. A major change has been the marked increase in the con-

sumption of livestock products, sugar, vegetables, oils and fats, and fruits with a decline in rice consumption. As a result, rice consumption has not risen beyond 12 million tons. This situation, for instance, produced an overstock of rice of about 2.4 million tons in 1968 alone.

From 1970, the Government started a program for production adjustments to balance the supply and demand of rice. The program included converting rice paddies into farm land for other crops. The annual rice crop has since been reduced to the level of about 12 million tons.

From this point of view, it may be said that the overproduction of rice has led Japanese agriculture to an important crossroad, forcing it to accelerate the diversification of agricultural production with more animal husbandry and fruit cultivations, for instance.

The lack of good pasture land has kept animal husbandry on a comparatively small scale. But the production of livestock occupied 25.6 per cent, or second place, in total agriculture production in 1979. As of February 1981, Japan had 2,104,000 head of dairy cattle, 2,281,000 head of beef cattle, 10,065,000 pigs and nearly 286 million chickens.

Another change in recent years in the pattern of farming has been a very substantial increase in the cultivation of fruits and vegetables, such as mandarin oranges, lettuce, and strawberries. Japan, in fact, produces an extremely wide variety of fruits, some of which are exported in considerable volume.

The trend of Japan's trade in agricultural products, especially in foodstuff imports, reflects the great change in domestic consumption in recent years. Japan was 75 per cent self-sufficient in its food requirements in 1980. A strong and persistently rising domestic demand has caused a corresponding rise in imports. In terms of value, imports in 1980 amounted to $22,728 million and accounted for 15.7 per cent of Japan's total imports. Chief imports were feed (corn, "Kaoliang"), fish (frozen shrimp, prawn, fresh fish), cereals (wheat), meat (beef, pork, mutton), sugar, and oil seeds (mainly soybean).

Exports are relatively insignificant (only 1.5 per cent of total exports in 1981), again a reflection of the continuing high domestic demand.

Forestry

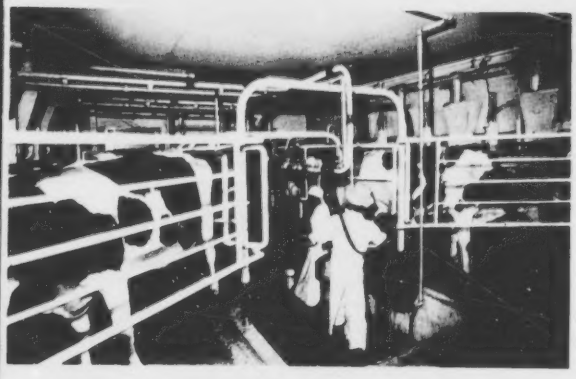
Forests cover about 66 per cent of Japan's total land area, aggregating 25 million hectares. Of the total, 58 per cent is privately owned, and 42 per cent owned by the central and local governments. Rich natural forests are found from the subtropical to the subarctic zones in the long Japanese archipelago. These forests are the main source from which the country derives its principal building material and much of its pulp for paper production.

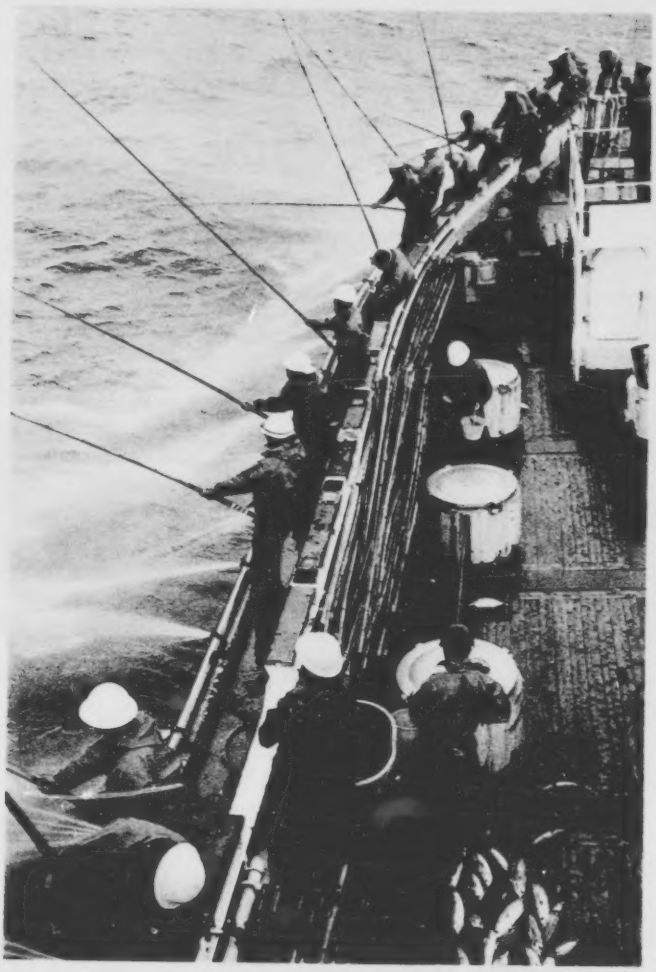
In recent years, the rising demand for timber for construction and as a raw material for pulp and paper manufacturing has consistently exceeded domestic production, with the result that substantial imports have been required. Imports rose from a value of $493 million in 1965 to $1,476 million in 1970 and to $4,470 million in 1980, in terms of the ratio of imports to total demand, the percentage rose from 28.6 per cent in 1965 to 55.0 per cent in 1970 and 67.0 per cent in 1980. As a result, Japan has become one of the biggest buyers of timber in the world and timber imports, including wood-chips, now rank second after crude oil in the nation's import trade.

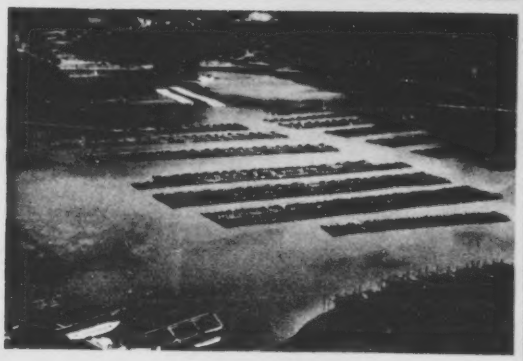
Principal import sources in 1980, in terms of value, were the United States, Malaysia, Indonesia, the Soviet Union, Canada, and the Philippines, in that order.

Of the total forested land, 37 per cent represents afforested and reforested areas.

(From top) Neighboring farmers meet to discuss communal farm work; harvest time for the rice crop and a mechanized rice planter (right); mechanized cow shed (left) and pasture lands in Hokkaido.







The Forestry Agency of the Ministry of Agriculture, Forestry, and Fisheries has set forth long-range plans for the management of forestry resources, both in terms of industrial needs and the people's welfare. For example, 92 localities within National Forests have been designated as "Natural Recreational Forests."

The most popular species of tree is *sugi* or Japanese cedar, which grows in almost all parts of the country except Hokkaido. Next come *hinoki* or Japanese cypress, and *akamatsu* or Japanese red pine.

Fisheries

The seas surrounding Japan have always been rich in all forms of marine life and the Japanese, since antiquity, have taken a substantial proportion of their food supply from these fertile fields. Thus, Japan has been one of the major fishing nations in the world. The total Japanese fishing catch in 1980 was 11,122,000 metric tons, representing 14.7 per cent of the total world fishing haul.

The industry can be divided into three broad categories: coastal fishing, offshore fishing, and pelagic or distant water fishing.

Coastal fishing is conducted either by boats of less than 10 tons, by set nets, or through artificial breeding techniques in shallow waters, popularly known as "fish-farming." Although a large number of persons are engaged in coastal fishing (365,000 persons in 1980, or 81.1 per cent of the entire industry), its production amounted to only 39.2 per cent of the total value, excluding whaling. As a result, coastal fishing productivity is less than one-fifth that of the larger fishing enterprises, and more recently, fishing grounds for coastal fishing interests have shrunk because of water pollution by waste from factories along the nation's coastal waters.

Pearls and oysters have so far been cultured in shallow sea waters. In addition, yellow-tail, prawn, scallops, and sea bream are now being raised by shallow sea culture methods and those thus grown are seen on the market with increasing frequency. Of the total fishing catch of 11,122,000 tons for 1980, production by shallow sea culture amounted to 992,000 tons, or 8.9 per cent of the total, showing a 2.6 times increase since 1965 as against the 1.7 times growth in the total fisheries production during the same period.

Offshore fishing is conducted mainly by medium-sized enterprises with boats in the 10–100-tons class. In 1980 the offshore fish catch amounted to about 51.7 per cent of the nation's entire catch (excluding whales), but, in terms of value, it amounted to only 30.4 per cent of total value.

Pelagic or distant water fishing is engaged in by large fishing vessels which operate in waters far from Japan. Their catch amounted to about 19.1 per cent of the total catch in 1980. Trawling centering on waters off the African continent is conducted by ships of the 1,000-tons class. Tuna fishing in equatorial and subequatorial waters around the world is conducted by ships of the 200–500-ton class.

From 1977, this division of labor in fishing activities began to change due to the introduction of 200-mile sea zones by various nations. Distant water fishing has been hit particularly zones, and in many places Japanese fishing boats have been forced to withdraw. The situation in the northern Pacific is especially severe and many large trawlers in the 2,000–3,000-ton class as well as mother ships for salmon and sea trout fishing are standing idle.

The Japanese fishing industry has accordingly been increasing its efforts to shift its

(Top) Man-made Japanese cedar forest alongside a natural broad-leaved forest in Kyushu.
(Lower left) Pole fishing for skipjack; (right) (1) coastal set-net fishing, (2) rafts for oyster culture, (3) fish farm for breeding young salmon in northern Japan.

activities toward sea farm breeding of marine resouces and away from fish catching, as well as to strengthen anti-pollution measures and encourage international cooperation in this field. In other words, the focus is now on what Japan can catch within its own 200-mile zone, both by breeding and by coastal and offshore fishing and by coastal and offshore fishing. As a major fishing nation, Japan is acutely conscious of the need for marine conservation and to this end has implemented various measures to regulate the major fisheries, carry out artificial hatching and stocking of fish and shellfish, and maintain as well as increase fishery resoures. In the international scene, Japan has concluded many agreements and treaties with other fishing nations for conserving marine resources and has also participated in joint scientific surveys of international fishing grounds.

Whaling operations are carried out in compliance with the regulations of the International Whaling Convention, which stipulates strict whale stock management. On the basis of the International Whaling Commission's scientific assessment of whaling resources, only a limited catch of well-preserved stocks is allowed, after providing for a high degree of safety in stock conservation.

Dolphins are sometimes captured in limited regions because their proliferation in recent years has resulted in increasing damage to certain fishing operations. To protect their livelihood, the local fishermen were forced to capture and subsequently kill dolphins because at present there is no other way to protect fisheries resources from the dolphins.

Since fiscal 1978, the Government has annually budgeted about ¥30 million (about $133,333) to develop means of preventing dolphin damage without necessitating the capture of dolphins. The budget was allocated to research on technology for controlling dolphin behavior through the use of sonic waves and other means. Field experiments have been conducted and further experiments are scheduled.

Mining

Japan is very poorly endowed with mineral resources and lacks most of the minerals necessary to sustain a modern industrial structure, having to import such basic materials as oil, iron ore, coking coal, and nonferrous metal ores such as copper, nickel, bauxite, etc. Japan's main mineral resource is coal with reserves estimated about 9 billion tons. However, this is mostly low-grade bituminous coal unfit for coking and other specialized purposes. Total consumption of coking coal in 1981 was 70.0 million tons of which 92.4 per cent was imported principally from Australia and the United States.

Seven other types of minerals are also mined on a fairly wide scale, but most of them are in quantities barely sufficient to meet minimum domestic demand. These seven are lead, zinc, pyrite, sulphur, limestone, feldspar, and dolomite.

Domestic output of petroleum is so limited that Japan must import practically all the crude oil it needs. The nation's demand for petroleum in 1980 was 231,569,000 kiloliters (Kl) and domestic output in the same year amounted to only 481,330 Kl or 0.20 per cent of total demand. Main import sources are Saudi Arabia, Iran, Indonesia, the United Arab Emirates, and Kuwait.

This dependence by Japan on imports for oil has stimulated Japanese interests to seek out and develop overseas sources. In Octobr 1967, the Government established the Japan Petroleum Development Corporation in order to supply risk capital to private enterprises undertaking overseas oil exploration. As of March 1980, 74 Japanese companies were engaged, with the assistance of the corporation, either in the search for or in the production of petroleum both at home and abroad.

Energy

Japan depends on overseas sources for 85.3 per cent of its energy requirements.

Oil, coal, hydroelectricity, natural gas, and nuclear power are the principal power

resources for Japan with oil being the most important, accounting for 65.8 per cent of the nation's total energy consumption though virtually all (99.8 per cent) must be imported.

Coal accounts for 17.0 per cent of total energy consumption, though it had been the dominating energy resource until the early 1960s.

With Japan's mountainous topography and abundant rainfall, hydroelectricity had played a larger role in the nation's power supply than thermoelectricity until the early 1960s, when the relationship was reversed with the rapid increase in power demand. (At the end of March 1980, of the 143.7 million kilowatts of Japan's total generating capacity, hydroelectric power accounted for 30 million kw or only 20.7 per cent, whereas thermogenerated power accounted for 98 million kw or nearly 68.4 per cent.) Hydroelectricity now accounts for only 4.8 per cent of the nation's total energy consumption.

Natural gas (including LNG) and nuclear power account for 6.0 per cent and 5.0 per cent, respectively, of total energy consumption. (As of May 1982, Japan had 24 nuclear power plants with a total capacity of 17.18 million kilowatts in operation and 17 plants with a total capacity of 15.70 million kilowatts either under construction or in the planning stage.)

A comparison of the proportion of domestically produced energy shows that even though the advanced countries in general are producing less of their own energy, with the exception of Britain and its North Sea oil fields, Japan's 12 per cent is extremely low and its degree of dependence on energy imports extremely high.

Industry accounts for the major portion of Japan's energy consumption, while the share consumed by the household and commercial sector is relatively low. (In the United States, however, transportation, households, and commercial establishments consume over 60 per cent of the energy supply.) Trends in the price and supply and demand of petroleum therefore have an important effect on Japan's economy, particularly its industrial sector.

With the recent oil price hikes, the need to reduce oil consumption and to develop alternate energy sources has taken on greater importance for Japan. In May 1979, an oil conservation target of 5 per cent was set by the Government and this was raised to 7 per cent in January 1980, thereby aiming at an annual saving of 20 million kiloliters. Conservation measures include (1) reduction of maximum room temperatures in winter to 18℃ from the previous 19℃, (2) a ban, in principle, of the use of private cars for commuting to work by civil servants, (3) encouraging the power industry to convert to non-oil energy sources, (4) urging industrial plants to intensify their energy saving efforts, (5) requesting business establishments to turn off neon signs at 11 p. m.

Efforts to develop alternate energies are also being intensified with the purpose of lowering Japan's dependence on imported oil from its present 73 per cent to approximately 50 per cent by 1990. Dependence on nuclear power will be raised from the present 3.6 per cent to 10.9 per cent in 1990. Development of new energies such as coal liquefaction, solar energy, and geothermal energy, will be accelerated. The Government secured a major 31 per cent increase in energy-related expenditures in the fiscal 1980 budget and in October 1980 the New Energy Development Organization was established to step up research on the development of alternate energies.

INDUSTRY

Metals

Production of metals in Japan, especially that of iron and steel, has expanded remarkably since World War II. Japan now ranks as the world's third largest steel pro-

ducer after the Soviet Union and the United States. In 1980, the output of crude steel amounted to 111.4 million tons. However, the growth of the steel industry in recent years has been slower because of the global recession following the 1973 oil crisis.

Japan's iron and steel industry depends heavily on imports for its raw materials such as iron ore, coking coal, and scrap iron. In 1980, Japan imported about 134 million tons of iron ore, with 39.7 per cent coming from Australia. Brazil, India, and Chile were other leading suppliers. In the same year, Japan imported 3.0 million tons of scrap iron, mainly from the United States, and 68.2 million tons of coking coal, mostly from Australia and the United States.

The key to the development of Japan's steel production has been the modernization of facilities and the application of new technologies developed both in Japan and overseas. The industry is characterized by large blast furnaces, widespread use of LD converters, and a high degree of efficiency in the operation of strip mills. Production of crude steel, which was 41 million tons in 1965, went up to 111 million tons in 1980. Hot-rolled ordinary steel output rose more than three times from 30 million tons in 1965 to 102 million tons in 1980, and hot-rolled special steel more than five times from 2.4 million tons to 12.9 million tons, and steel pipe from 3 million tons to 9.7 million tons.

The industry has developed high strength steel, weather resistant steel and surface-treated steel sheets. Super-size wide flange beams have also been developed and are being widely used in the construction of skyscrapers and high-rise buildings, which are appearing in Japanese urban centers in increasing numbers.

In terms of facilities, Japan has 23 hot strip mills and 72 cold strip mills (1980 figures), second in number only to the United States, and some of the world's largest blast furnaces which can produce up to 12,000 tons of pig iron a day. Of the 1981 crude steel output, LD converter steel accounted for 75.5 per cent and electric furnace steel 24.5 per cent. The high ratio of LD converter steel represents a major characteristic of today's Japanese steel industry.

To maintain its competitive productivity in the future, the steel industry will require further updating of facilities and technological development for energy conservation. Reorganization among the numerous makers, and reform measures to strengthen the industry's somewhat weak financial constitution are two other pending tasks.

The non-ferrous metal industry, which formerly expanded steadily to meet the growing demand from high growth industries such as automobiles, electric appliances, and building construction, has also been hit hard by the current recession. The slump in demand, starting from 1974, soon reached serious proportions in the case of copper and aluminium, but the signs of a recovery were noted from 1978.

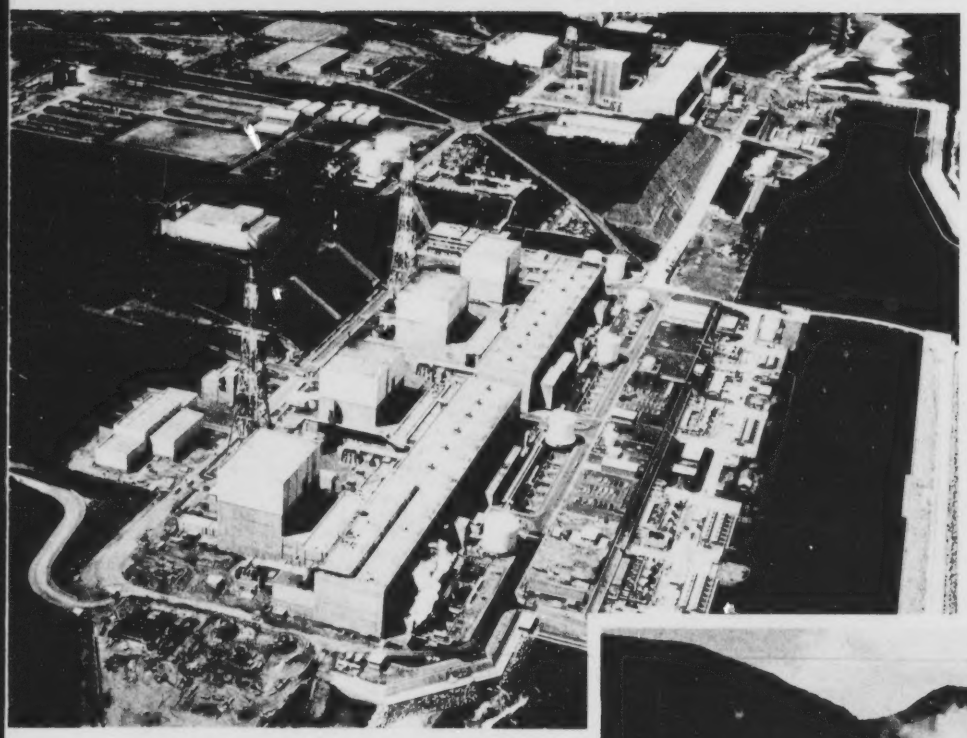
In 1980, 1,014,000 tons of copper,

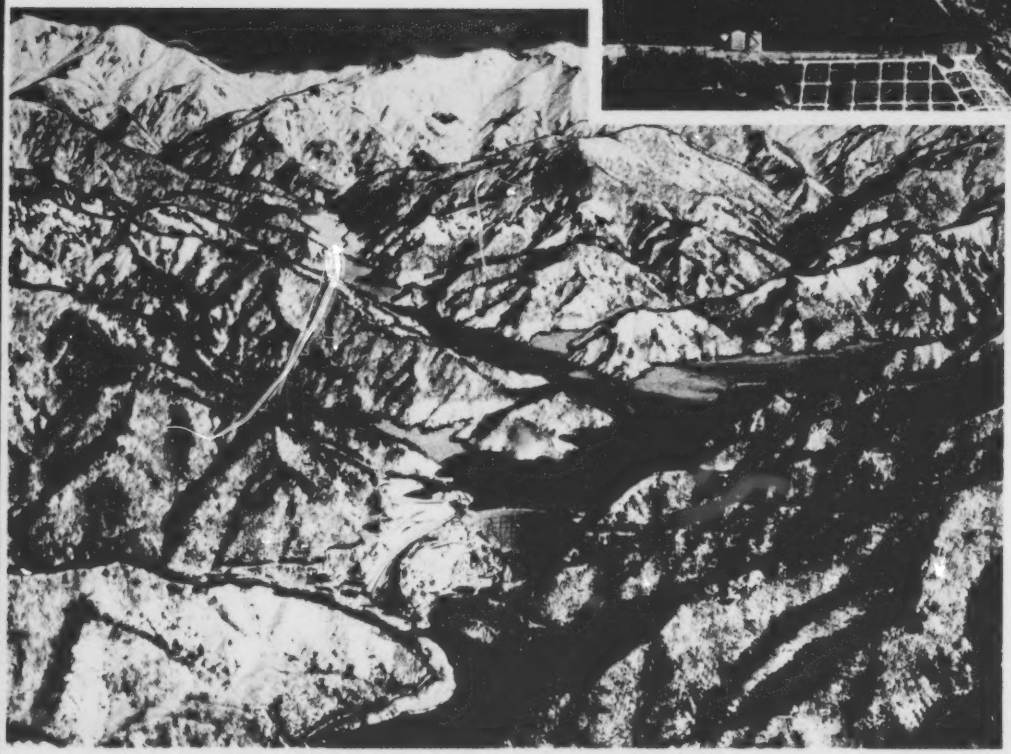
Iron and Steel Production

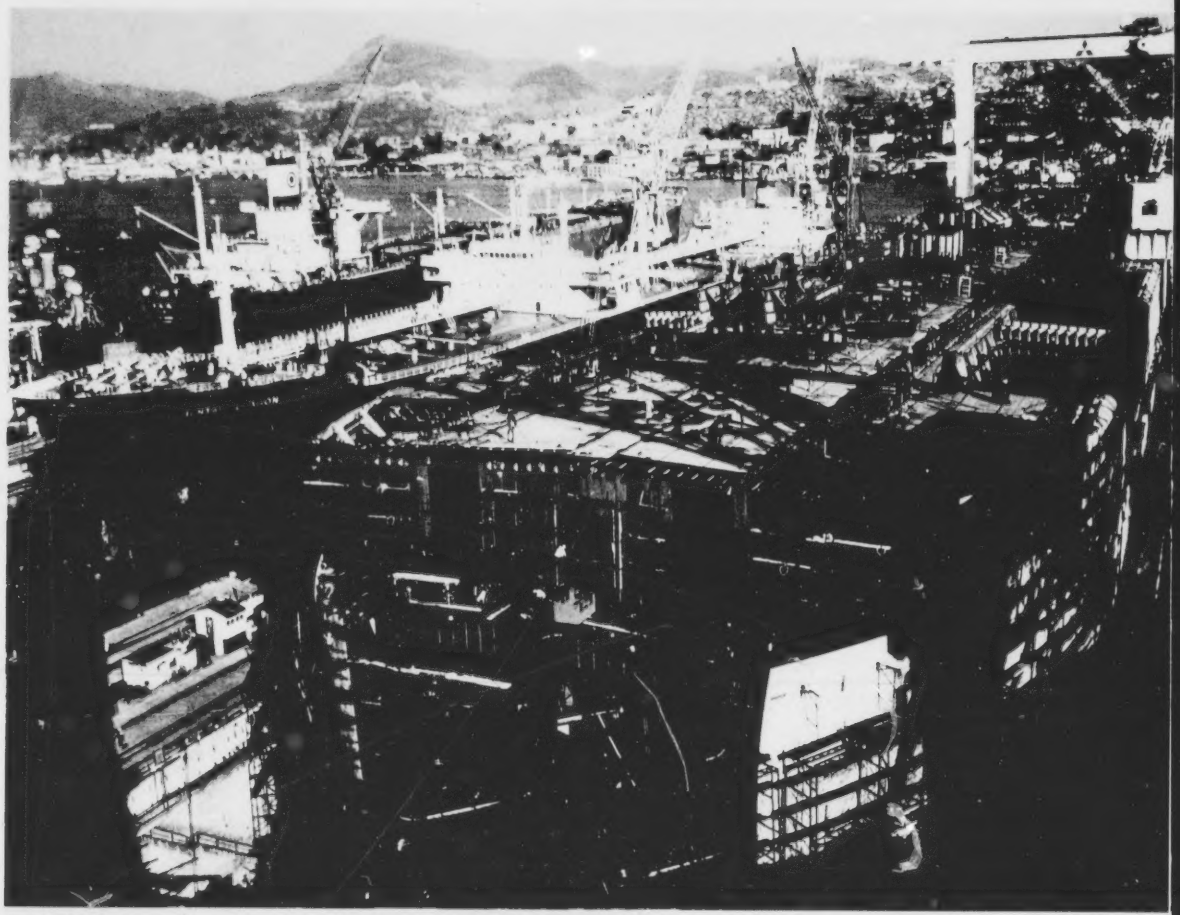
(Unit: 1,000 metric tons)

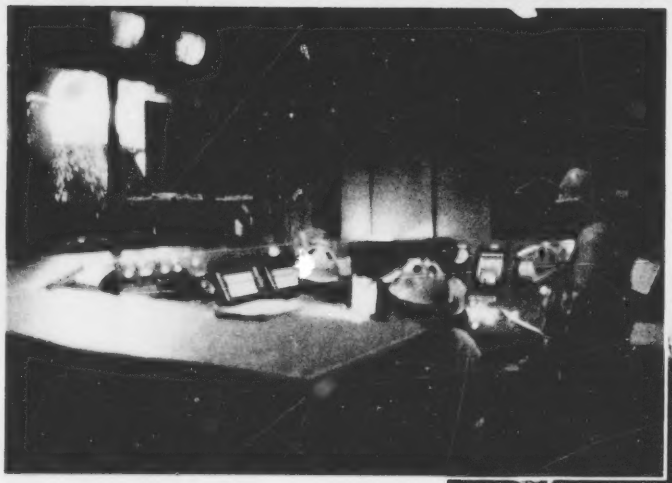
Year	Pig iron	Crude steel	Hot-rolled steel
Prewar record	4,256 (1942)	7,650 (1943)	4,810 (1943)
1946	203	557	426
1951	3,127	6,502	4,972
1960	11,896	22,138	17,221
1970	68,047	93,322	75,933
1975	86,877	102,313	85,834
1978	78,589	102,105	91,294
1980	87,041	111,395	101,760

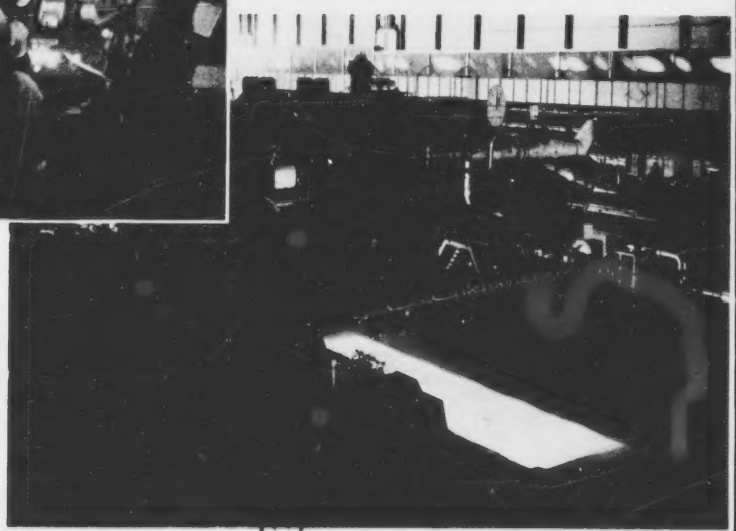
(Top) A nuclear power station in Fukushima.
(Center right) Geothermal power plant in Oita.
(Below) A hydroelectric power dam deep in the mountains of the Japan Alps. ⇨











1,091,000 tons of alminium, 739,000 tons of zinc, and 221,000 tons of lead were produced.

Machineries

Even before World War II, Japan was not only self-sufficient in shipbuilding, rolling stock and textile machinery, but was exporting these items in considerable volume.

Since the war, the machinery industry has set the pace for Japan's economic growth. Taking the year 1975 as 100, the production index in the electrical machinery industry as a whole stood at 212 in 1980, while that of home electrical appliances had risen to 140. The production index in the automobile industry rose sharply to 167, and that of construction machinery to 142.

Evidence of the growth, diversification and high technical standards of the Japanese machinery industry can be seen in almost every corner of the world. Ships made in Japanese yards sail the seven seas. Japanese cameras, transistor radios, and watches, television sets, tape recorders, and electronic calculators have established a reputation for quality and are in wide demand in world markets. Japanese cars, buses and trucks are helping to meet transportation needs on six continents. Electrical generators and other heavy electrical machinery made in Japan are helping supply light and power for homes and industries. Japanese spinning and weaving machinery is being used in the textile industries in many countries of Asia and other parts of the world.

Machinery exports in 1980 amounted to $81.4 billion or 62.8 per cent (61.3 per cent in 1979) of total exports.

(Top) Ships under construction.(Below left) Control center at a steel mill; (right) automated hot rolling steel mill.

Electrical Machinery and Electronics

Electrical machinery represents a significant sector of the Japanese machinery industry. Its spectacular growth since the mid-1950s has been stimulated by increased demand for heavy electrical machinery from the expanded power industry and the vast heavy industry sector as well as by the large increase in demand for household appliances.

Exports of electrical machinery, including electronic products, amounted to $18.5 billion or 23.9 per cent of machinery exports and 14.3 per cent of total exports in 1980.

One of the major developments in Japan's machinery industry after World War II has been the remarkable rise in the production of electronic equipment. The industry's growth rate was especially high in the 1960s. However, the growth rate of the industry began to decline in 1971, and the output for 1975 for the first time dropped below what it had been a year earlier. Many of the major household electrical appliances had about reached the peak of their diffusion. Also, with the onset of the recession, consumers began to show a cautious attitude toward new purchases. The industry's recovery in 1976 was supported largely by a surge in exports.

Consumer electronics, including television sets, radios, tape recorders, and stereophonic record players, occupied 35.4 per cent in value of the total production of electronic equipment in 1981, registering a 19.9 per cent increase from the previous year. Color TV sets, long the prime mover among consumer electronics, have now reached close to 100 per cent diffusion, but demand is still on the rise for such products as air conditioners, microwave ovens, stereo systems, and tape recorders. The industry, moreover, has the necessary technological expertise to come up with advanced electronic computers, inventory control and other commercial information systems, as well as new

mass-selling consumer products like home video tape recorders and stereophonic/ bilingual TV sets.

In 1981, the industry produced 17 million radios, mostly transistorized, 3.3 million black and white TV sets, 12.6 million color TV sets, and 66 million tape recorders.

In the field of industrial electronics, which includes such products as communications equipment, computers, electric measuring instruments, and various types of electronic calculators and broadcasting equipment, production value totaled $15.2 billion in 1981, a 11.9 per cent increase over the previous year.

Exports of electronic products in 1981 amounted to ¥4,187 billion ($18.5 billion), a increase of 27 per cent from the previous year. Exports of consumer electronic products increased by 27.0 per cent and industrial electronic products registered an increase of 28.6 per cent with computers showing a large gain of 58.8 per cent. Electronic components also increased by 22.5 per cent.

However, Japan is beginning to face stiffer competition for export markets from other countries in the field of heavy electrical machinery and consumer electronics products like desk-top calculators and radios.

Shipbuilding

In 1956 or 60-odd years after the first steel ship was built in 1890, Japan became the world's leading shipbuilding nation, and subsequently came to command more than 50 per cent of the world market. Against the background of a sustained expansion of demand for vessels until the early 1970s, the Japanese shipbuilding industry introduced new techniques, expanded and rationalized equipment, and developed economy-type bottoms, supplying high-grade and high-performance large bottoms to not only Japanese shipowners, but also the world shipping industry. Meanwhile, the introduction of new building techniques, such as the block welding system and the advanced outfitting system, led the Japanese shipbuilding industry to keep growing at a remarkable pace.

The oil crisis of late 1973, however, shunted the course of the world economy from expansion to shrinkage, and brought about a sharp worldwide fall in the transport of oil and other ocean cargoes, which in turn led to a precipitate decline in the demand for new vessels. Consequently, the Japanese shipbuilding industry, which until then had continued to develop along with the "high growth" of the Japanese economy, also suffered a sharp decrease in orders especially for supertankers. In 1976, Japanese shipbuilders' order receipts plunged to less than a quarter of the peak level reached in 1973. Furthermore, cancellations of earlier concluded shipbuilding contracts poured in. In net terms, receipts for new orders fell to almost zero, bringing on a sustained drop in the work volume. Because shipbuilding facilities had recently been expanded, the industry came to find itself with considerable excess capacity. In addition, competition from other countries has become much stiffer. Not only are the developing countries making rapid progress in this area, but also some European countries are becoming more protective of their own shipbuilding industries.

Indicative of the industry's plight was a string of bankruptcies of small shipbuilders since early 1977, as well as the near bankruptcy of one top-ranking shipbuilder in 1978, saved only by outside assistance. Under these circumstances, Japan's share of world shipbuilding, after dropping below 50 per cent for the first time in 20 years to 46 per cent in 1976, continued its downward trend and stood at 31.9 per cent in 1978 when 4.9 million tons were launched. However, in 1979 the trend was reversed with orders received by Japanese shipbuilders being more than twice the figure of the previous year for a total of about 5.5 million gross tons. In 1981, Japan's share of world shipbuilding was 51.9 per cent and about 8.9 million tons were launched.

Motor Vehicles

The Japanese automobile industry has been enjoying steady growth in parallel with the rapid development of motorized transport throughout the nation. The industry was already well established in the 1930s with production centering on trucks and other heavy vehicles. Starting in the early 1950s, the industry began to pay increasing attention to the production of passenger cars, and steady progress in design, quality, and output has been registered over the past decades. In 1981, Japan's automobile industry was the largest in the world, producing about 11.2 million four-wheeled motor vehicles.

Japan's motor vehicle exports totaled 6.2 million units in 1981, and motor vehicles were the largest export item in value, accounting for 18.4 per cent of Japan's total export value in the same year.

Up to the 1960s, trucks constituted the principal motor vehicle export, but the ratio has drastically changed, and in 1981, passenger car exports constituted 71.7 per cent of total automobile exports. Overseas markets have also undergone a marked change from the developing countries in the early 1960s to the industrially advanced nations after the mid-1960s. Another development has been the growing export of knock-down cars for overseas assembly and the manufacturing of car parts abroad. Overseas assembly plants were first established in countries in Asia, Latin America, and Africa, and later in Oceania, the Middle East, Europe, and America.

Another major development in recent years has been the steadily rising technical standards of Japanese vehicles. With marked improvements in road conditions in Japan, manufacturers have turned from almost exclusive emphasis on roadworthiness and durability and are concentrating on anti-pollution devices as well as speed and acceleration performance, fuel econony, riding comfort, and exterior design. More recently, with the Government's new emission control regulations, Japanese automakers have started producing cars with low-pollution engines while making rapid advances in their development research for exhaust gas control.

Japan is also the world leader in both the production and the export of two-wheeled vehicles, particularly motorcycles. In 1981, Japan produced 7.4 million two-wheeled vehicles, of which 4.3 million or 54.6 per cent were exported.

Rolling Stock

Japan's highly developed network of public and private railways has always ensured a steady demand for rolling stock. Production has been at a high level for the past decade because of extensive development of the Japanese National Railways (JNR) system and private lines. Although in former times steam locomotives were a major production item, today the emphasis is on electric and diesel locomotives and electric cars.

The technical standards of Japan's rolling stock industry are highly rated throughout the world. The Shinkansen line of super-express trains opened in October 1964, embodying the world's finest rolling stock technology at the time. A standard-gauge double track line, it initially covered the 515.4-kilometer distance between Tokyo and Osaka with no level crossings. The line has since been extended to Okayama and further to Hakata, Kyushu, for a total length of 1,069.1 km. The 16-coach trains can attain a maximum speed of 210 km/h. For safety in operations, the line uses the ATC (automatic train control) and CTC (central train control) systems, virtually eliminating the need for handbrakes. Work is now under way on three more lines, one stretching northeast to the Tohoku area, another northwest toward the Sea of Japan, and the third linking Tokyo with the new international airport at Narita.

By way of new technology, both the JNR and Japan Air Lines (JAL) are in the process of developing the linear motor car, a new high-speed rail vehicle that will float above the track by electromagnetic force,

thereby minimizing noise and vibration. In December 1979, a record speed of 517 kilometers per hour was reached at the JNR test track in Hyuga, Miyazaki Prefecture. JAL's linear motor car has also made headway with the success of the first human-driven test run. The Ministry of Transport plans to unify the two projects in the future and actively supports putting the linear motor car into practical use.

Aircraft

Japan's aircraft industry dates from 1911 and was held in high esteem internationally in prewar days. However, it was virtually destroyed during World War II, and aircraft manufacturing was prohibited until 1952, when the Allied Occupation ended.

The technological underdevelopment caused by these blank years later proved to be a crucial handicap to the postwar development of the aircraft industry in Japan, in contrast with the fast technological progress made in this field by other industrially advanced nations.

In view of the nation's enlarged and more diversified transportation requirements and with Japan's potential technological development, more and more people are calling for the active promotion of aircraft construction as a new core element of the country's future industrial structure.

In 1981, 132 airplanes and helicopters were produced in Japan, 58 of which were for the Defense Agency, 6 for other domestic markets, and 68 for export. The breakdown by type is as follows:

Piston engine planes	17
Turbo-jets	33
Turbo-props	56
Helicopters	26

Two Japanese commercial aircraft in particular have achieved international recognition: the YS-11, a 60-passenger short-range turbo-prop transport, and the MU-2, a 7-to-11-passenger multipurpose turbo-prop light plane, both incorporating the latest STOL (short takeoff and landing) technology.

Another highly popular light plane has been the four-passenger Fuji FA-200 "Aerosubaru," designed for ease in operation and maintenance. This plane has a superior rate of climb and acceleration compared with other aircraft in the same class.

All three of these planes have been exported in large numbers as their performance and safety records received international attention. Some 44 per cent of YS-11s, over 90 per cent of MU-2s, and about 64 per cent of FA-200s have been for overseas markets, and most of the exported light planes have been sold in the United States. Furthermore, the MU-300, a jet-engine version of the MU-2, has recently succeeded in its first test flight, and the production of a new "Aerosubaru" 6-to-8-passenger twin-engine business plane, model 700, has also begun.

Production of the YS-11 came to a stop in March 1973, after a total production run of 182. As Japan's first domestically manufactured commercial aircraft, the YS-11 was a great success, and it achieved international recognition for Japan's high technological standards. Springing from the YS-11 success, plans have been worked out for the development of a new commercial transport. Designated as the YX, the proposed new aircraft will be a low-noise, medium-range jet with a passenger capacity of 200–250, incorporating advanced automatic approach systems.

(Top) Final assembly line for passenger cars.
(Center) Film carrier-type large-scale integrated circuits (LSI) (left) which are the nerve center of ultra-thin electronic calculators (right) and are produced in up-to-date semiconductor plants (middle photos).
(Below) Final assembly of superexpress train coaches. ⇨

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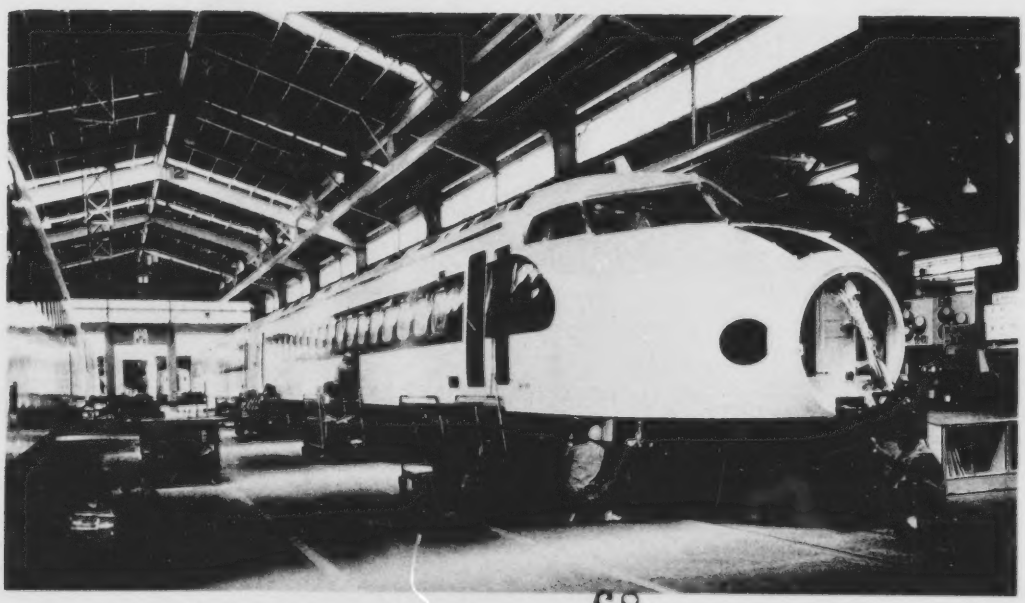

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Precision Machinery

The high technical standard and the rapid technological advance achieved by Japanese industries are reflected in the field of precision machinery. Outstanding examples are to be found in the optical goods industry, including cameras, binoculars, and electron microscopes, and in the growing production of timepieces, including watches, clocks and precision timers.

The optical goods industry produces still cameras, movie cameras and projectors, telescopes, microscopes, optical measuring instruments, and optical surveying instruments. The production of optical instruments in Japan dates back to just after World War I, when the emphasis was the designing and polishing of lenses and the manufacture of glasses.

The Japanese camera industry has been a world leader since 1962 in terms of output. In recent years, it has been annually producing more than 8 million still cameras and about 1.5 million movie cameras, mostly 8mm. In 1981, production figures rose to 9.8 million units and 1.6 million units, respectively. Of these totals, more than half are exported. Exports have risen steadily from some 2.3 million units in 1965 to 3.9 million units in 970 and further to 13.0 million units (still cameras 11.9 million, movie cameras 1.1 million) in 1980.

The industry has developed many new optical instruments for use in medical research. These include the phase-contrast microscope, the ultraviolet and the infrared microscope, the gastrocamera, the fiber-optics gastroscope, and the tele-endoscope.

Japanese binoculars and monoculars, noted for high-quality lenses and precision manufacture, still remain important export products of the optical goods industry. A total of 420,000 units was exported in 1981. Major export markets are North America and Europe.

Timepieces are another major item in the field of precision goods. Japan's exports of watches and clocks expanded from $129 million in 1970 to $2,014 million in 1981. The high quality and precision workmanship of Japanese timepieces has won world-wide recognition. Technological advances of epochal importance in timepiece production, including the advent of crystal oscillation technology in recent years, typify the notable sophistication and systematization in Japan's precision machinery industry in general.

Chemicals

The chemical industry represents one of the most important fields of industrial activity in Japan today. The industry expanded tremendously during the 1960s, and Japan now ranks among the world's major producers of various basic chemical raw materials. The extremely rapid growth of the industry has been achieved despite the fact that such essential materials as petroleum, salt, potassium salt, phosphate ore, and oils and fats, have to be imported.

Along with this expansion, the industry underwent a significant structural change with the development of the petrochemical industry and the further shift in production from chemical fertilizers and industrial soda chemicals to synthetic organic chemicals such as synthetic resin and plastics.

With the wider use of petrochemical raw materials in industry, the petrochemical industry, started in the 1950s, expanded over the next 20 years to become a world leader together with the American industry, and the production of ethylene, the basic material for the industry, now amounts to 3.7 million tons, or one-third of the world total.

(Top left) FA-200 sports plane; (right) MU-2 executive plane.
(Below) Petrochemical complex in Chiba at dusk.

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Production of Chemical Products

(Unit: 1,000 tons)

	Ammonium Sulphate	Polyvinyl Chloride resin	Polyethylene	Synthetic rubber	Caustic soda	Photographic film (1,000㎡)
1965	2,489	483	896	143	1,305	19,501
1970	2,419	1,161	1,305	698	2,606	39,505
1975	2,125	1,125	1,295	789	2,861	58,771
1978	1,959	1,304	1,767	1,029	2,776	91,045
1979	1,883	1,592	2,165	1,107	3,021	101,864
1980	1,878	1,429	1,860	1,094	3,157	108,920
1981	1,817	1,129	1,671	1,010	2,871	114,171

Total petrochemical industrial production in 1981 was valued at $21.4 billion, compared with some $10.3 billion five years earlier.

Japan has a total of 18 petrochemical complexes in operation, all located along the Pacific Ocean and Seto Inland Sea coastlines. These complexes have been developed in close relation with the oil refining industry located on coastal regions convenient to both land and sea transportation routes and near major consumption centers.

Spiraling raw material and energy prices as well as sluggish demand for products caused a slowdown that has beset the chemical industry since the 1973 oil crisis. No longer can the industry as a whole expect to see the rapid growth that it registered in the past, and in some fields, such as the production of chemical fertilizers and polyvinyl chloride resin, companies face a deep-seated recession of a structural nature.

Textiles

The textile industry is assuming a proportionately declining role in the economy, as the emphasis has shifted from light to heavy industries. Before the war, textiles accounted for more than half of Japan's total exports. By 1981, they had declined to 5 per cent. This trend has been further reinforced by the slump in overseas as well as domestic demand in the days since the oil crisis. Production in 1981, for example, had not advanced beyond the 1970 level of output.

Since the war, synthetic textiles have grown in importance, and next to the United States, Japan leads the world in synthetic fiber output, accounting for 14 per cent of total world production (1976 figures). On the other hand, cotton textiles and silk have suffered a decline in relation to the industry as a whole.

Even synthetic textiles have not fared well since about 1974, due to the domestic slump, increased competition from manufacturers in neighboring Asian countries and the United States, and the depressing effect on exports of the yen's appreciation. The industry is now responding to the hard times by taking such anti-depression measures as coordination and reorganization among manufacturers, scrapping of machinery, and cutting back of operations.

FOREIGN TRADE

Japan is now a major trading nation and a full-fledged partner in a growing world economy. Not only in its needs for raw materials, but also for industrial and consumer goods, the Japanese economy depends upon the free flow of international trade.

The following tables show the degree to which Japan depends on imports for major commodities.

Self-Sufficiency Ratio of Principal Agricultural Products (Per cent)

Product	1965	1977	1980
Rice	95	144	107 (1979)
Wheat	28	4	10
Barley	57	7	13
Soy beans	11	3	7
Fruits	100	98	81
Meat	90	77	81
Milk & dairy products	86	87	86
Sugar	30	21	28

Ratio of Imports to Total Consumption of Principal Industrial Materials (Per cent)

Product	1970	1980
Raw cotton	100.0	100.0
Raw wool	100.0	100.0
Iron ore	99.6	99.6
Bauxite	100.0	100.0
Copper ore	83.6	98.3
Nickel	100.0	100.0
Coal	76.6	81.4
Crude oil	99.4	99.8
Natural gas	32.7	90.4
Lumber	51.5	66.1

Raw materials, fuels, and foodstuffs constitute Japan's principal imports. Japan relies on overseas sources for practically all its raw cotton, raw wool, and bauxite and for more than 90 per cent of its iron ore and crude oil. The total value of exports and imports on a customs clearance basis and their ratios in world exports and imports are as follows:

(Unit: $ millon)

Year	Exports	Japan's ratio in world exports(%)	Imports	Japan's ratio in world imports(%)
1965	8,452	5.1	8,169	4.6
1970	19,318	6.8	18,881	6.4
1975	55,817	7.0	57,853	7.1
1976	67,305	7.4	64,895	7.0
1977	81,126	7.9	71,328	6.8
1978	97,543	8.2	79,343	6.4
1979	103,045	6.9	110,670	7.3
1980	129,812	7.1	140,520	7.6

Japan's exports increased by an average of 16.8 per cent annually between 1971 and 1981, or at a rate about 1.2 times that of world exports. The share enjoyed by Japan in world exports ranked third, next to the United States and the Federal Republic of Germany. The rate of increase of imports was almost the same, averaging 16.6 per cent for the same period, about 1.1 times that of world imports. In terms of world imports, Japan ranked also third after the United States and the Federal Republic of Germany in that order.

Exports by Commodity (1979~81)

(Unit: $ million)

	1979	1980	1981
Foodstuffs	1,207	1,584	1,738
Marine products	608	809	756
Texiles and textile goods	4,908	6,281	7,197
Synthetic fabrics	1,436	2,251	2,679
Cotton fabrics	333	485	602
Woolen fabrics	38	50	58
Rayon fabrics	67	—	—
Spun rayon fabrics	69	—	—
Clothing	351	495	580
Pharmaceuticals and chemical products	6,100	6,811	6,830
Chemical fertiilizer	328	379	352
Plastic materials	1,675	1,840	1,916
Non-metallic products	1,547	1,862	2,126
Ceramic ware	401	548	561
Metal and metal products	18,379	21,365	22,496
Iron and steel	14,113	15,483	16,706
Non-ferrous metal products	3,127	1,941	1,465
Machinery	63,183	81,199	100,197
Power generating machinery	2,103	2,531	3,179
Office machinery	1,831	2,271	2,644
Metalworking machinery	1,534	1,742	2,070
Radios	2,497	2,993	3,233
TV sets	1,283	1,649	1,925
Automobiles	17,021	23,223	26,444
Motorcycles	1,925	2,804	3,322
Ships	3,869	4,635	7,309
Optical instruments	3,861	4,514	5,516
Tape recorders	2,102	3,305	5,456
Watches and clocks	1,286	1,721	2,010
Others	7,708	10,478	11,548
Plywood	83	66	66
Toys	254	335	287
Total	103,032	129,581	152,132

Imports by Commodity (1979~81)

(Unit: $ million)

	1979	1980	1981
Foodstuffs	14,415	14,670	15,122
Meat	1,712	1,525	1,927
Wheat	1,090	1,231	1,273
Maize (feed)	1,088	1,499	1,867
Sugar	708	1,208	732

Textile raw materials	2,449	2,414	2,404
Wool	726	694	688
Cotton	1,264	1,372	1,416
Meatal ore and scrap	6,850	8,491	7,284
Iron ore	2,999	3,461	3,504
Scrap iron	492	502	266
Non-ferrous metal ore	2,879	3,765	3,011
Other materials	12,897	13,053	10,318
Raw hides	587	388	408
Soy beans	1,272	1,316	1,384
Crude rubber	440	606	500
Lumber	7,353	6,995	4,449
Pulp	734	1,083	859
Mineral fuels	45,286	70,264	72,366
Coal	3,549	4,451	5,528
Crude oil	33,471	52,972	53,126
Petroleum products	4,500	5,140	5,359
Pharmaceuticals and chemical products	5,178	6,230	6,491
Machinery	8,343	9,876	10,220
Metalworking machinery	176	237	228
Office machinery	783	1,030	1,028
Others	15,254	16,107	18,057
Iron and steel	899	899	1,068
Non-ferrous metals	3,416	4,511	4,183
Textiles	3,832	3,191	3,451
Total	110,672	141,104	143,290

Japan's changing industrial structure at home and new trade patterns and other factors abroad have resulted in a distinct shift both in the substance and the distribution of the country's foreign trade.

Before the war, textile raw materials accounted for 32 per cent of total imports, and textiles made up more than half of total exports. In 1981, textile raw materials accounted for only 1.7 per cent of total imports, while textile exports had fallen to 4.7 per cent of the total export trade. Among raw materials and fuels, there has been a sharp rise in the imports of petroleum, iron ore, and non-ferrous metals, reflecting the growing importance of Japan's heavy industries.

Meanwhile, exports of metal products, machinery, and chemicals, which before the war amounted to an average of only 16 per cent of total exports, had risen by 1981 to 85.1 per cent ($129.52 billion). Particularly striking advances were made in the latter half of the 1960s in exports of heavy industrial products, such as steel, ships, automobiles, and radios. Automobiles in particular, accounting for 17.4 per cent of all exports in 1981, have recently overtaken steel to become the top export industry. Shipbuilding, in contrast, has been on the decrease in terms of tonnage since 1974. These trends reflect the changes in the economic surroundings throughout the world and in Japan's international competitiveness brought about in part by the yen's appreciation and the higher cost of oil and other resources.

In terms of distribution, before World War II the Asian market provided the biggest outlet for Japanese goods. China, India, and Indonesia alone took 40 per cent of Japan's total exports. Today, North America is the region with which Japan has the greatest commerce, buying 27.7 per cent of its exports and selling 22.0 per cent of its imports. Next is Southest Asia, accounting for 23.8 per cent of the exports and 22.6 per cent of the imports. The Middle East is in third place, absorbing 11.1 per cent of the exports while providing 31.7 per cent of the imports.

Japan's biggest single trading partner is the United States, which in 1981 took 25.5 per cent of Japan's total exports. Japan, in turn, is the United States' second largest customer after Canada.

When viewed from the area composition of exports, those to developed countries accounted for 48.5 per cent of the total in 1981, those to developing countries 45.3 per cent, and those to the socialist countries 6.2 per cent.

(Top) Loading air freight on a jet cargo plane.
(Center left) Foreign passenger cars being unloaded at a Japanese port; (right) Japanese and foreign businessmen discussing an import-export order.
(Below) Imported foods section at a department store. ⇨

JAPAN AIR LINES

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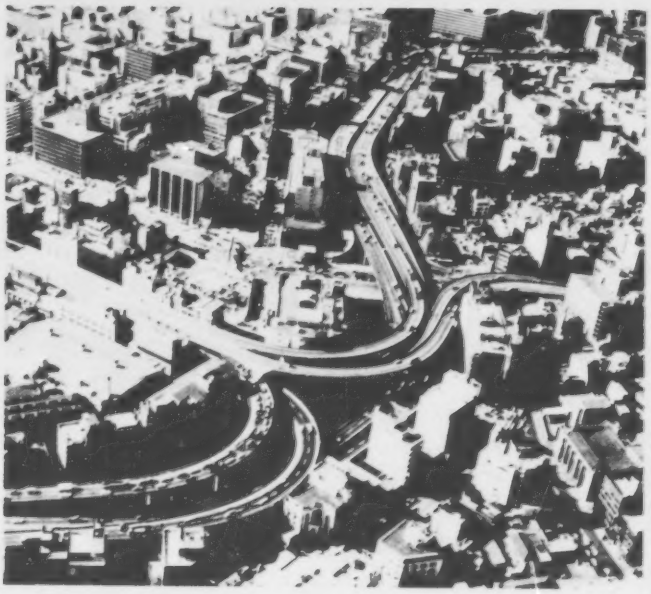
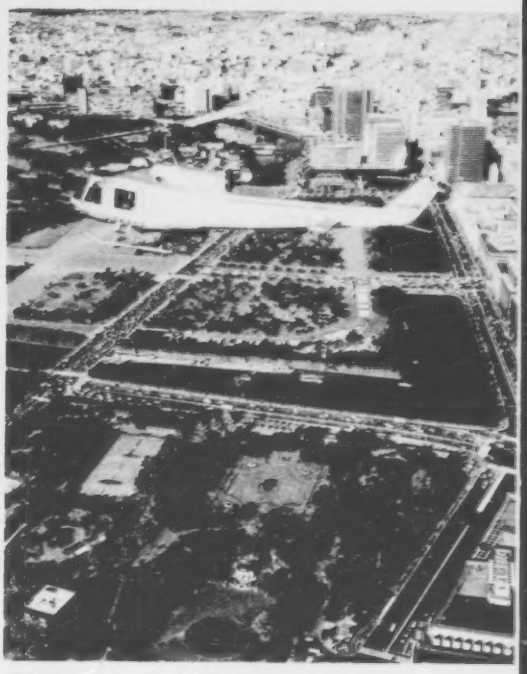
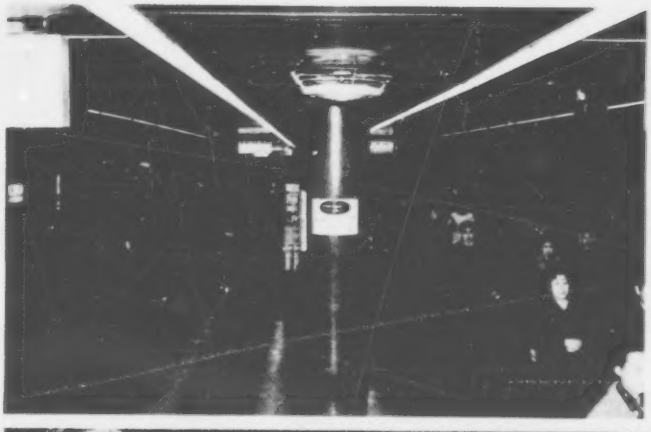
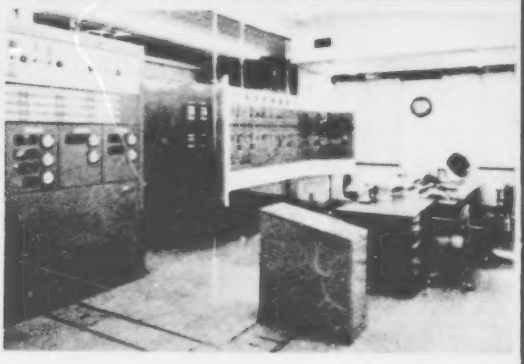
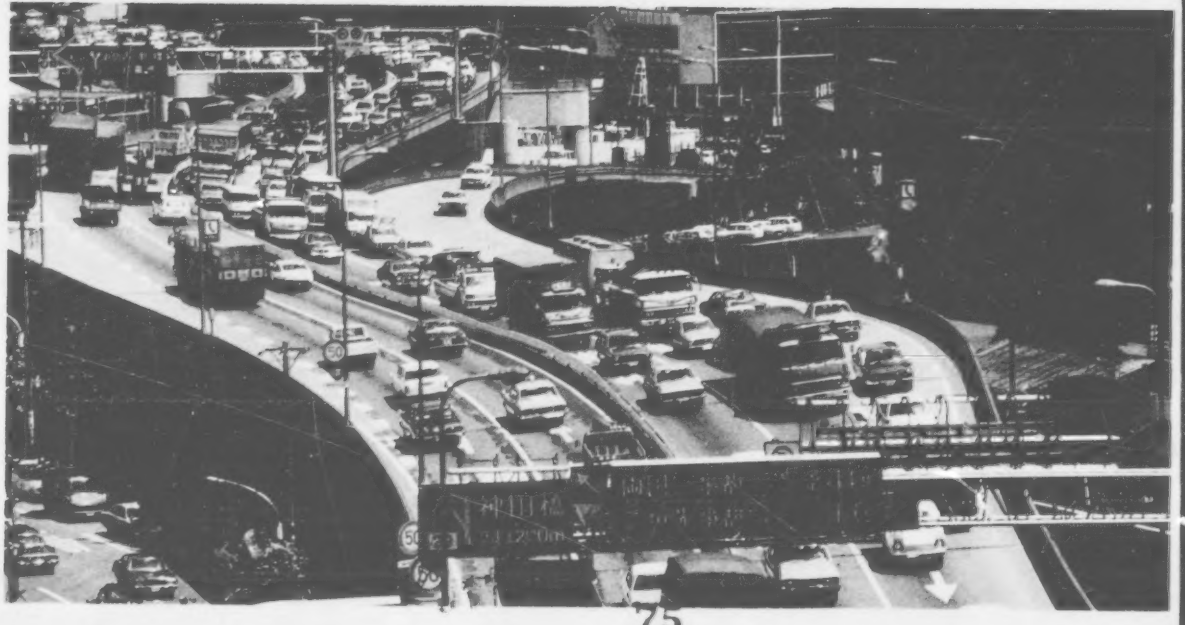










Japan's imports from developed countries, on the other other hand, accounted for 36.6 per cent of its total imports in 1981, while those from developing areas reached 58.1 per cent, and those from the socialist countries 5.3 per cent. (See inside of back cover for graphs and diagrams.)

Imbalances in the two-way trade between Japan and other regions have become serious since the price of oil spiraled upward. Basically, the resulting large deficit Japan has with the oil-producing nations ($25 billion in 1981) is being offset by surpluses with industrialized nations and non-oil-producing nations. Although to a certain extent this situation is an inevitable consequence of Japan's economic structure, bilateral trade disputes have broken out with a number of areas, particularly the United States and Western Europe.

TRANSPORT

The rapid growth of the Japanese economy has resulted in a heavy demand on transportation facilities, and Japan's transport industry has responded by introducing faster, safer, and more economical means of transportation. Examples are, for instance, the completion and extension of one of the world's fastest train services, the launching of some of the world's largest oil tankers, and the rapid expansion of international air routes by Japan Air Lines.

(Top left) Expressways in central Tokyo; (right) police helicopter on traffic patrol over Tokyo.
(Center left) Subway station; (right) integrated traffic information system.
(Below) Control sign panel on expressway warning of an accident ahead.

Land Transport

Railway transport still plays an important role in Japan's land transport. But, now, a vast network of expressways is in service, and highway transport is increasing in importance.

The Japanese National Railways (JNR), a public corporation, is the biggest single enterprise in the country. As of June 1981, the JNR was operating 26,917 kilometers (11,741 miles) of railways and accounted for 25.0 per cent of total land passenger transport (in passenger-kilometers) and 9.6 per cent of total land freight transport (in ton-kilometers) in the country.

The JNR is a world leader in transportation research and its most significant achievement to date has been the successful inauguration of the world's second fastest trains on the Shinkansen (literally, "New Trunk Line"). Opened on October 1, 1964, this line provides superexpress service between Tokyo and Osaka, a distance of 515 kilometers (320 miles) in 3 hours and 10 minutes. At present, these trains run at a maximum speed of 210 km/h (130.5 mph).

On March 15, 1972, a 161-km extension from Osaka to Okayama was opened, and on March 10, 1975, a further 393-km extension to Hakata in Kyushu was opened. The Shinkansen trains cover the overall distance of 1,069 kilometers (664 miles) from Tokyo to Hakata in 6 hours and 56 minutes.

In addition to the local lines operated by the JNR, regional rail service is provided by 135 private companies (including 15 major ones), which in fiscal 1980 maintained a total of 5,596 kilometers (3,481 miles) of track. These private railways accounted for about 15.2 per cent of total land passenger transport (in passenger-kilometers) and 0.2 per cent of total land freight transport (in ton-kilometers) in fiscal 1980.

The railways are supplemented by extensive networks of bus service both in the cities and throughout the countryside. The

volume of passenger and freight transport carried by road traffic accounted for 55.1 per cent and 39.1 per cent, respectively, of total land transport in fiscal 1980.

As of June 1981, Japan had 2,879 kilometers of expressways. The Government has carried out, since 1954, plans for a national network of arterial expressways whereby eventually 32 routes will be built totaling approximately 8,294 kilometers. Technical surveys of the entire route have already been completed.

Of this projected network, a 190-kilometer stretch between Nagoya and Kobe (the Meishin Expressway) was completed in July 1965, and the Tomei Expressway covering the 346.7-kilometer distance between Tokyo and Nagoya was opened to traffic in May 1969. These expressways are now playing an important role in the nation's economic devlopment by linking three of the nation's major economic industrial districts.

In addition to the Tomei and Meishin Expressways, the Chuo Expressway linking Tokyo with Nagoya via the mountainous center of Japan's main island and the Tohoku Jukan Expressway linking Tokyo with Aomori, northernmost city on the main island, are under construction with more than half of the total length already opened to traffic.

Besides these major expressways, highway construction is now in progress in other regions of the country. In addition, urban expressway networks, one in Tokyo (totaling 131.7 kilometers as of June 1981) and another in the Osaka-Kobe district (92.1 kilometers), are providing for a smooth flow of motor traffic within these metropolitan areas.

Subway lines are in service in eight large cities—Tokyo, Osaka, Nagoya, Kobe, Yokohama, Sapporo, Kyoto and Fukuoka. Tokyo's ten lines covered a total distance of 186.7 kilometers (116.1 miles) as of June 1981 and Tokyo now ranks fourth after New York, London, and Paris in the total length of subway lines. Extensions for a total of 11.5 kilometers are under construction for Tokyo's subway lines.

A practical application of a commercial monorail transport system was initiated in October 1964, with the opening of the Tokyo Monorail covering the 13-kilometer (8-mile) distance between downtown Tokyo and Tokyo International Airport at Haneda in approximately 15 minutes. In addition to the straddling-type Tokyo Monorail, there is the regular 7-kilometer-long, suspended-type Shonan Monorail service linking an important commuting junction of the JNR and a growing residential suburb southwest of Yokohama.

Maritime Transport

Japan's merchant fleet was the third biggest in the world before the war but was reduced to a fraction of its former size by wartime losses. In 1946, Japan had only 17 oceangoing ships.

Total tonnage was restored to the prewar level of nearly 6,500,000 tons by the end of 1959, and Japan today has the world's second biggest merchant fleet after Liberia, with 40,960,000 gross tons of shipping as of July 1980, including both oceangoing and coastal vessels.

Despite this increase in shipping service, Japan's merchant fleet can hardly keep up with the recent expansion of the nation's foreign trade. As a result, Japanese ships in 1980 handled only 20.5 per cent of the nation's exports and 37.4 per cent of imports.

Because of the importance of the merchant fleet to the economy, especially for the steady import of natural resources from overseas and the dispatch of exports, the Government has considered it necessary for Japan to continue to build such oceangoing ships as container ships and ore-carriers, though demand for oil tankers is expected to decrease for the time being.

In 1980, coastal shipping carried 500 million tons of cargo, or 2.9 per cent less than in the previous year. This represented 8.4 per cent of the year's total domestic surface cargo transport (in cargo tonnage, 50.6 per cent in ton-kilometers), while railways and

trucks accounted for, respectively, 2.8 per cent (8.6 per cent in ton-kilometers) and 88.8 per cent (40.8 per cent in ton-kilometers).

In 1979, Japan's 1,089 ports, including 127 major ones, handled 2,903 million tons of cargo, showing a 6.4 per cent increase over the previous year. Since 1961, the Government has carried out a number of five-year plans for port improvement to cope with the expansion of the economy and to alleviate congestion at ports caused by the shortage of berths.

To prevent further pollution of coastal waters, which has become increasingly serious in recent years, the Marine Safety Agency has been increasing its control and surveillance in ports and along the coasts. Active efforts have also been made to improve waste and waste oil disposal facilities in port areas.

Air Transport

Japan is today a major crossroad for the world's airlines. Modern jets and other aircraft operated by a score of international airline companies constantly arrive at and depart from the nation's two largest terminals, the New Tokyo International Airport and Osaka International Airport.

Japan Air Lines (JAL), founded in 1953, is the sole Japanese airline operating scheduled international flights. JAL inaugurated its first international air service in February 1954, between Tokyo and San Francisco. Since then, its routes have been continuously expanded until today it serves all continents.

In October 1969, agreement was reached between Japan and the United States for the inauguration of the Great Circle route service (the shortest route from Tokyo to New York) by JAL. Meanwhile, JAL has inaugurated independent trans-Siberian services, and began operating round-trip flights between Tokyo and Paris via Moscow in March 1970, and between Tokyo and London via Moscow in June 1970, the shortest route between Europe and the Far East. In June 1978, JAL began its South American service with flights into São Paulo and Rio de Janeiro, and added Abu Dhabi to its south-bound route to Europe. JAL now operates scheduled flights into 40 cities of 28 countries around the globe.

In 1979, Japan's international air carrier handled 23.0 billion passenger-kilometers, or 22.8 per cent more than in 1978, and thus ranked fourth among the 91 members of IATA (the International Air Transport Association).

In anticipation of a larger volume of international air traffic with the more frequent use of large-type jetliners and supersonic transports, the new Tokyo International Airport was opened at Narita, some 60 kilometers (37.3 miles) east of Tokyo, in Chiba Prefecture in 1978

Domestic air transport volume in fiscal 1979 was 30.2 billion passenger-kilometers and 273 million ton-kilometers, representing an increase of 12.4 per cent and 22.1 per cent, respectively, compared with the previous year. In recent years, the number of air passengers on domestic routes has been growing at an annual rate of 10 per cent.

Five domestic airlines, including JAL, provide nationwide and local service which links the principal cities of Japan and even offer routes to intermediate points throughout the country.

Tourism

Tourism is an important industry in Japan and strenuous efforts are being made to provide the finest facilities in accommodations and travel for the increasing number of visitiors from abroad, in view of the growing internationalization of business operations and the advent of the age of jumbo jet planes.

In 1980, 1,316,632 people from overseas, including 728,371 tourists, visited Japan, and the tourist trade earned $644 million in foreign exchange, as compared with around 724,000 tourists and $201 million in 1972.

At the same time, 3,909,333 Japanese went abroad in 1980 and spent $4.6 billion,

as compared with around 266,000 tourists and $87 million in 1965, giving rise to a considerable deficit in the nation's tourist trade balance.

The continued upswing in foreign travel by Japanese, either in groups or singly, reflects the higher standards of living of the people as a whole and the rising personal incomes of the individual as well as the popularization of comparatively inexpensive organized group tours in recent years. With the high-level growth of the national economy, the Government, from 1964 onward, instituted a series of measures liberalizing financial regulations concerning foreign exchange for travelers, thereby greatly easing procedures for those wishing to travel abroad. The restrictions were completely lifted as of April 1978.

By nationality visitors from North America (about 376,000 persons) occupied 24.2 per cent of the total number of foreign visitors to Japan in 1981. Those from Asian countries (799,000) were 51.5 per cent, with 18.8 per cent for visitors from Europe (292,000) and 2.5 per cent from Oceania (39,000).

Japanese travelers in 1981 visited such countries and regions as the United States (about 362,000 persons), especially Hawaii and Guam, Taiwan (568,000), the Republic of Korea (423,000), Hong Kong (342,000), as well as the Philippines and Singapore among others.

FINANCE

National Finance

The Japanese Government's fiscal year begins on April 1 and ends on March 31 of the following year.

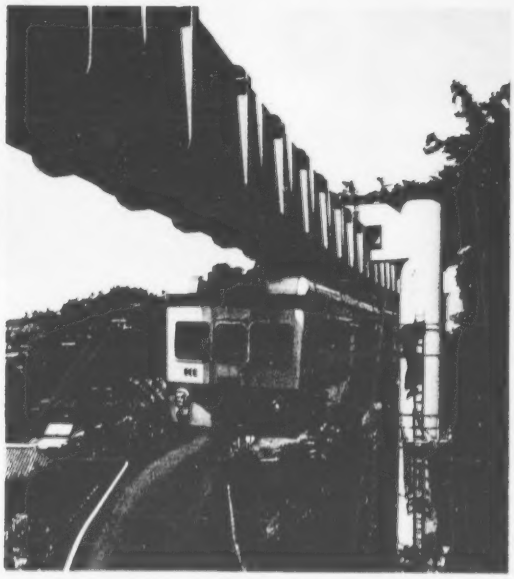
The national budget consists of the General Account and Special Accounts, which are submitted to the Diet together with the budgets of 15 Government-affiliated agencies.

Of these three budgets, the General Account budget is the basic one for government administration. The Special Accounts are created by law for specific projects or for the management of special funds outside the limit of the General Acoount. Each Special Account has its own specific revenue sources, such as transfers from the General Account, revenues from Government enterprises administered under the Special Account, and interest revenue from loans. There were 38 such Special Accounts for fiscal 1981, including those for the Printing Bureau, postal service, road improvement, flood control, foodstuffs control, the national pension scheme, and grants to local governments.

Government-affiliated agencies, such as the Japanese National Railways, Nippon Telegraph and Telephone Corporation, Japan Tobacco and Salt Public Corporation, Small Business Finance Corporation, Housing Loan Corporation, and Export-Import Bank of Japan, have a separate legal status from Government departments to ensure their efficient management. However, capital for these agencies is all provided by government funds and their budgets must be approved by the Diet.

The national budget is prepared by the Cabinet and submitted to the Diet for approval. Ministers and other heads of Government departments first prepare reports on expected revenues and required expendi-

(Top) The Tokaido Shinkansen superexpress line (left) and computerized reservation and ticket-issuing counter at Tokyo Station (right).
(Center left) The Tohoku Shinkansen superexpress line to nothern Japan under construction; (right) suspended-type monorail line in Kanagawa Prefecture.
(Below) The Port of Yokohama, Japan's largest port for foreign trade.



Revenues and Expenditures of the National Budget (Initial budgets)

(billion yen)

	FY 1980	FY 1981
Revenues		
General account	42,588.8	46,788.1
Special accounts	95,121.1	105,122.7
Government-affiliated agencies	20,310.8	22,040.8
Duplications	64,012.1	71,295.3
Net total	94,008.6	102,656.3
Expenditures		
General account	43,681.4	46,788.1
Special accounts	89,770.6	99,013.7
Government-affiliated agencies	20,437.9	22,222.0
Duplications	64,003.1	71,285.5
Net total	88,794.2	96,738.3

tures under their respective jurisdictions for the next fiscal year, sending their reports and estimates to the Minister of Finance in August. After a series of consultations with each Government department, the Ministry of Finance compiles the draft budget in line with the fiscal guidelines approved beforehand by the Cabinet. The draft budget is made final at a Cabinet meeting.

The Cabinet submits the draft budget to the Diet, normally in January, when the Minister of Finance delivers his annual fiscal policy speech.

A provisional budget is prepared to cover a limited period of a fiscal year when the budget is not expected to be approved by the Diet before April, or the beginning of the fiscal year. This provisional budget is absorbed into the regular budget when it is approved.

A supplementary budget is prepared and submitted to the Diet for approval when there is an urgent need for additional expenditures, such as those for natural disaster relief and pay raises for Government employees.

The fiscal 1981 budget totaled ¥46.8 trillion (US$212.7 billion: $1 = ¥220) in the General Account (up 9.9 per cent over the initial budget for fiscal 1980) and 12.3 trillion (US$55.8 billion) in the Fiscal Investment and Loan Program (down 14.0 per cent), which includes loans for private housing. The General Account represented 21.3 per cent of the gross national product.

Major expenditures in the General Account were for social welfare (21.1 per cent), education and science (10.2 per cent), public works (12.3 per cent), defense (5.2 per cent), and grants for local governments (18.8 per cent).

The most striking change from prewar budgets was the decrease in defense expenditures, from 40 per cent to less than 10 per cent of the total budget. But with growing recognition of its responsibility for strengthening national defense capability, Japan has been steadily increasing its defense approriations.

Tax and stamp receipts were estimated at 69.0 per cent of total revenue in the initial General Account for fiscal 1981 and the ratio of bond revenue was set at 26.2 per cent while earnings from Government monopoly enterprises, such as those from tobacco, salt, and camphor, were figured at 1.6 per cent.

Since the middle of the 1950s, the Japanese economy showed an annual growth averaging over 10 per cent in real terms. The increase in tax revenues accompanying this growth made it possible for the central Government and local governments to implement various policies designed to raise the level of public welfare, while making wide-ranging cuts in taxation every year. The recession that set in at the beginning of 1974, however, led to the issue of deficit-covering bonds in fiscal 1975. The ratio of bond revenue has since gone up, reaching 26.2 per cent in fiscal 1981 and the high dependence on bonds has brought about difficulties in the administration of public finance at both the national and local levels.

(Top) February Snow Festival in the downtown section Sapporo city.
(Below left) Tokyo's Ginza district at night; (right) central part of Osaka City.

General Account Budget–Revenue

(billion yen)

	FY 1980 (initial)	FY 1981 (initial)
Tax and stamp receipts	27,145.0	32,284.0
Direct tax	20,210.0	23,949.0
Income tax	11,010.0	13,079.0
Corporation tax	8,754.0	10,352.0
Others	446.0	518.0
Indirect tax, etc.	6,935.0	8,335.0
Liquor tax	1,427.0	1,830.0
Gasoline tax	1,506.0	1,521.0
Commodity tax	1,141.0	1,379.0
Customs duty	695.0	774.0
Stamp revenue	906.0	1,382.0
Others	1,260.0	1,449.0
Monopoly profit	783.3	762.3
Receipts from Government enterprises and properties	10.0	12.2
Receipts from the sale of Government properties	48.3	72.9
Miscellaneous receipts	1,176.4	1,379.9
Public bonds	14,270.0	12,270.0
Carried-over surplus	348.4	6.8
Total	43,681.4	46,788.1

General Account Budget–Expenditure

(billion yen)

	FY 1980 (initial)	FY 1981 (initial)	Increase rate (%)
Social Welfare	8,264.4	8,836.9	6.9
	(18.9%)	(18.9%)	
Public assistance	956.3	991.9	
Social security	1,388.2	1,495.9	
Social insurance	5,130.6	5,555.5	
Public health service	410.2	411.5	
Education and Science	4,601.4	4,742.0	3.1
	(10.5%)	(10.1%)	
National Government's share of compulsory education expenses	2,024.3	2,094.6	
Transfer to the National Schools Special Account	980.8	1,007.8	
Promotion of science and technology	351.8	374.8	
Public school facilities	622.3	582.5	
School education assistance	541.7	591.8	
National Debt	5,491.6	6,654.2	21.2
	(12.6%)	(14.2%)	
Pensions and Others	1,639.9	1,803.0	9.9
	(3.7%)	(3.9%)	
Local Allocation Tax (Grants to local governments)	7,828.8	8,766.6	12.0
	(17.9%)	(18.7%)	
National Defense	2,266.5	2,400.0	5.9
	(5.2%)	(5.1%)	
Public Works	6,801.0	6,655.4	−2.1
	(15.6%)	(14.2%)	
Erosion and flood control	1,104.3	1,106.7	
Road improvement	1,910.8	1,901.3	
Harbors, fishing ports, and airports	528.3	523.4	
Housing	754.3	761.3	
Public service facilities	966.4	985.8	
Improvement of conditions for agricultural production	897.5	899.7	
Disaster reconstruction	300.5	284.9	
Economic Cooperation	381.9	425.3	11.4
	(0.9%)	(0.9%)	
Measures for Small Business	242.7	249.7	2.9
	(0.6%)	(0.5%)	
Foodstuffs Control	955.5	994.8	4.1
	(2.2%)	(2.1%)	
Energy Countermeasures	424.9	497.5	17.1
	(1.0%)	(1.1%)	
Miscellaneous	4,432.8	4,412.6	−0.5
	(10.1%)	(9.4%)	
Reserves	350.0	350.0	
	(0.8%)	(0.7%)	
Total	43,681.4	46,788.1	7.1
	(100%)	(100%)	

Local Finance

The state and the local autonomies–prefectures, cities, towns, and villages–divide up functions and responsibilities and collaborate in various administrative activities. Tax revenues are divided between the central Government and local governments in accordance with respective expenditures that they have to bear. In allocating revenue sources to local governments, the method currently used is to collect as national tax a part of the tax revenue that should properly go to the local goverments, and distribute it among the local governments in accordance with the state of their finances. This method results from the fact that there are at present considerable differences in the economic strength of the various regions, although it would be pref-

erable for the entire local revenue to derive from local taxation from the point of view of ensuring a healthy development of local autonomy.

Of the total tax burden borne by the nation, 64 per cent is in the form of national tax and 36 per cent in the form of local tax. However, revenue sources are redistributed between the central Government and local governments. The actual allocation of tax revenues is currently 28.5 per cent to the central Government and 71.5 per cent to the local governments (fiscal 1981 figures). Thus, with this tax revenue redistribution, the work of administrating the welfare of the people is primarily being carried out by the local governments.

Banking and Securities

The Bank of Japan was established in 1882 as the central bank and is the sole issuer of bank notes. It plays the focal part in determining and carrying out monetary policies formulated by the Policy Board, which includes representatives of Government agencies, banks, and industrial circles.

Currency in circulation consists of notes issued by the Bank of Japan and subsidiary coins issued by the Government. Currency circulation amounted to 21.3 trillion yen at the end of 1981, registering an increase of 4.6 per cent over the previous year.

Bank notes, ranging in denomination from ¥500 to ¥10,000, account for 95 per cent of the total currency value. State minted coins, in denominations of from ¥1 to ¥500, are also in circulation.

Private banks, which supply more than half of the nation's industrial funds, constitute the heart of Japan's financial institutions. As of December 1980, there were 86 private banks, consisting of three long-term credit banks, 13 city banks, 63 local banks, and seven trust banks. They had a total of 8,759 branches including 137 overseas branches.

There are other financial institutions for small businesses, such as mutual loan and saving banks and credit associations, as well as those for the agriculture, forestry, and fishery industries, including agricultural cooperative associations. The Government has its own financial institutions, mainly for public financing, such as the Trust Fund Bureau (Ministry of Finance) and the Postal Savings and the Post Office Life Insurance Bureaus (Ministry of Posts and Telecommunications).

In January 1970, the Bank of Japan was re-admitted to full membership in the Bank for International Settlements (BIS) in Basel, Switzerland. However, starting in 1963, Japan's central bank was already sending representatives as observers to the monthly BIS conference as well as its general meeting held annually in Basel. Not only is this an indication of Japan's strengthened position in the international monetary system, but it means that Japan is assuming a heavier responsibility for international monetary cooperation.

The history of the securities exchange business in Japan is fairly old, dating back to 1878, when the Tokyo Stock Company was established. Since then, many changes have taken place in its organization and administration.

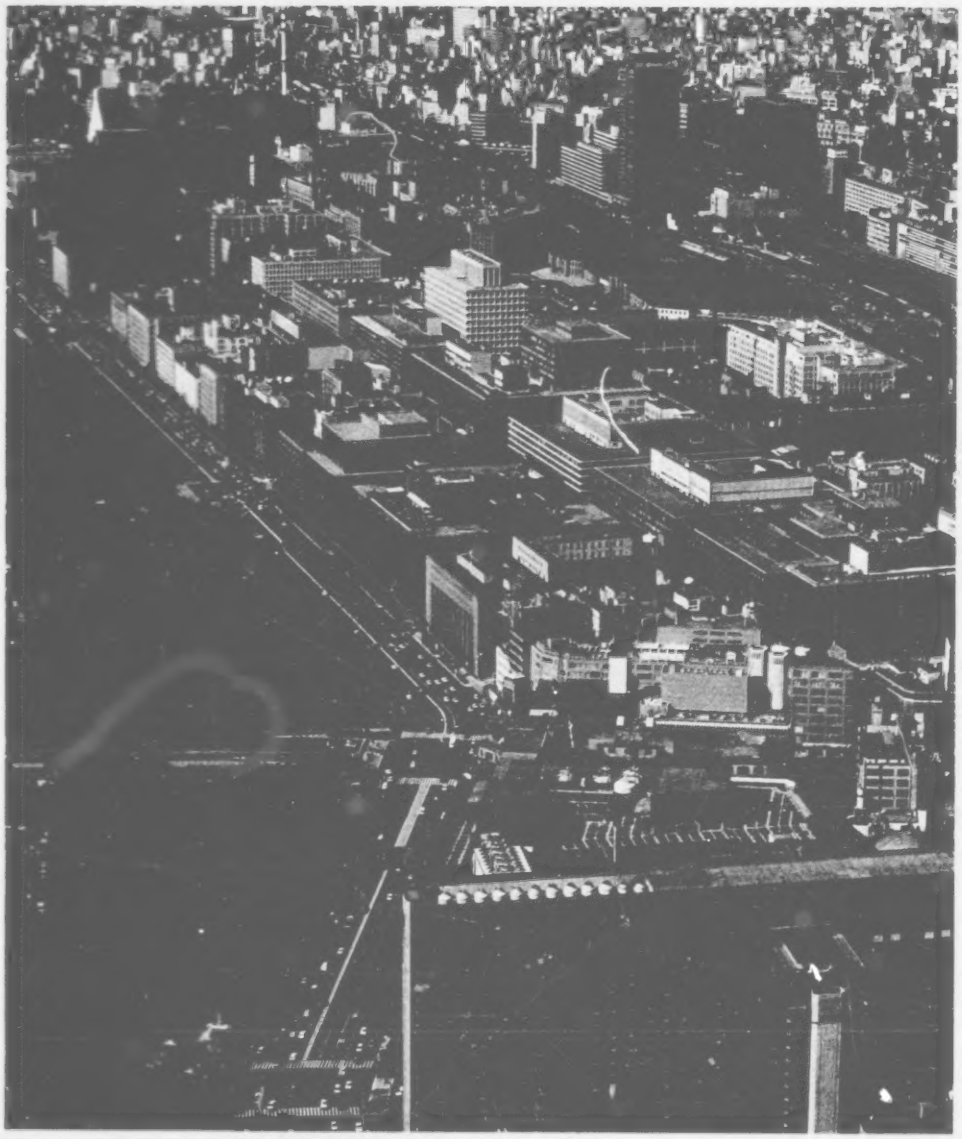
After the war, the popularization of securities ownership and the need to protect shareholders called for the reestablishment of organized and responsible securities exchanges. Thus stock exchanges successively came into being in Tokyo, Osaka, and Nagoya in 1949. At present there are altogether eight stock exchanges.

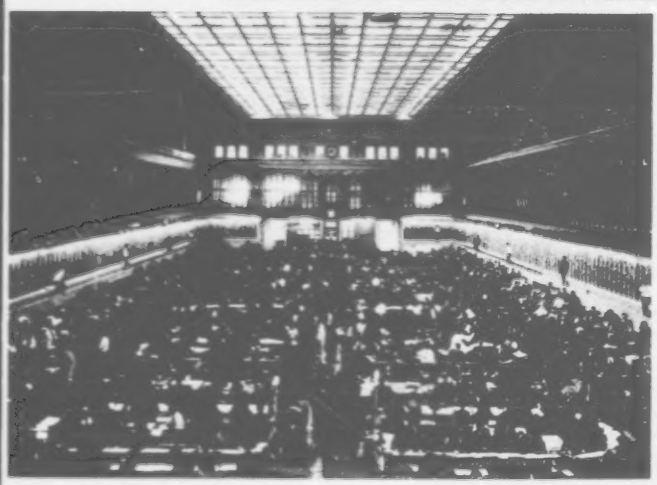
The Japanese stock-holding population has been increasing in number due chiefly to the rising income level of the Japanese people, and reached about 19.8 million as of March 1981. This means that one out of every six Japanese owns stocks.

On the other hand, Japan's high economic growth and favorable export performance during the past decade have drawn many foreign investors to the Japanese stock market. The net purchases of Japanese stocks by foreigners and foreign corporations through market transactions

amounted to ¥5.5 trillon (or US$25.0 billion) in fiscal 1981. The Japanese stock market, based upon a broader and firmer foundation, is more and more taking on an international character.

(Top) The Marunouchi business district of central Tokyo.
(Below left) The floor of the Tokyo Stock Exchange, (right) lobby of a commercial bank.





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SOCIAL CONDITIONS

POPULATION

Population Growth

The Tokugawa Shogunate instituted regular, nationwide census-taking in 1721, conducting nationwide surveys every six years. From these records, it is estimated that Japan's population remained stable at approximately 30 million during the Tokugawa Period.

Following the Meiji Restoration, the population began to increase steadily as the nation's industrialization progressed. Between 1872 and 1975, the population grew more than three times, from 34,806,000 to 111,940,000.

Japan now ranks seventh in the world in terms of population after the People's Republic of China, India, the Soviet Union, the United States, Indonesia, and Brazil in that order.

At present, Japan conducts a census every five years, the next one being in October 1985.

Population Density

As of October 1980, the population density in Japan was 310 persons per square kilometer, placing it among such densely populated nations as Bangladesh, the Republic of Korea, the Netherlands, and Belgium.

At present, about 76 per cent of the Japanese people live in cities. Of this urban population, 58 per cent is crowded into the "Big Four" metropolitan areas, comprising the 16 prefectures around Tokyo, Osaka, Nagoya, and Kitakyushu. Other large and medium-sized cities in other regions, including Sapporo, Sendai, and Hiroshima, are also attracting people.

For some time a growing number of Japanese, especially young people have been leaving the towns and villages of the countryside and moving to the big cities to take advantage of greater job opportunities and to enjoy an urban way of life. However, more recently, this once notable population outflow from the countryside has somewhat subsided. In recent years, net population inflow has shown a decrease in each of the four major urban areas, as more people live in the surrounding towns and smaller cities rather than in the big cities.

The population figures of the ten biggest cities according to the censuses of 1960, 1970, and 1975 as well as the 1980 estimate were as follows:

(Unit: 1,000 persons)

	1960	1970	1975	1980
Tokyo (Ward areas only)	8,310	8,841	8,647	8,349*
Yokohama	1,375	2,238	2,622	2,774
Osaka	3,012	2,980	2,779	2,648*
Nagoya	1,592	2,036	2,080	2,082
Kyoto	1,285	1,419	1,461	1,473
Sapporo	524	1,010	1,241	1,402
Kobe	1,114	1,289	1,361	1,367
Fukuoka	647	853	1,015	1,089
Kitakyushu	—	1,042	1,058	1,065
Kawasaki	633	973	1,015	1,041

* The decrease reflects a move to neighboring residential areas where the population increase has been substantial.

⇨ *Children playing among the high-rise buildings of Tokyo' Shinjuku subcenter.*

Birth and Death Rates

The average annual rate of increase of Japan's population before the war was 1.4 per cent. It rose to 1.6 per cent in 1950-51, but has since declined, standing at 0.81 per cent in 1980-81. The population increased by 964,000 to 117,880,000 in 1981.

The birth rate was 32.4 per thousand in 1930. Just after the war, it registered a sharp rise, reaching a peak of 34.3 births per thousand in 1947, reflecting the so-called "baby boom" of the immediate postwar years. The average birth rate was 20.9, 17.5, and 17.7, respectively, in the 1950s, the 1960s and the 1970s. But recently, this rate has fallen drastically, registering a low 13.6 in 1980.

On the other hand, Japan's death rate ranged, before the war, between 17 to 18 per thousand. But since the end of the war, infant mortality rates as well as deaths from acute epidemics, tuberculosis, and other diseases have sharply declined as a result of marked progress in medical science and better medical care facilities.

The average death rate was 8.6 during the 1950s and 7.1 in the 1960s. The death rate dropped to 7.0 per thousand in 1963 and even further to 6.2 per thousand in 1980.

Consequently, the average life expectancy at birth, which in 1935 stood at 47 years for men and 50 years for women, has increased by more than 25 years, reaching 73.32 years for males and 78.83 years for females in 1980.

Population Structure

The age composition of Japan's population, as expressed in the conventional population pyramid, is undergoing a gradual alteration.

The typical structure before the war, with the large population of children 14 years of age and under forming a broad base, disappeared and by 1965 the population pyramid of Japan had become somewhat column-like as a result of the relatively sharp decrease in the number of children. In terms of age groupings, children accounted for 23.5 per cent of the total population in 1981, while the ratio stood at 67.2 per cent for the adult population (15 to 64 years) and 9.3 per cent for the aged population (65 years and older).

In 1978, the nation's productive population–the adult population between 15 and 64 years of age–reached an all-time high of 79.3 million. This, however, resulted from a temporary factor in that those children born during the postwar "baby boom" had grown to join the productive population.

Since 1965, however, the drop in the birth rate has brought about a downtrend in the increase rate of the productive-age population. If this trend continues, the nation will sooner or later face such problems as the steady aging of the working population with fewer young workers and an ever-increasing need to provide care for an aging population.

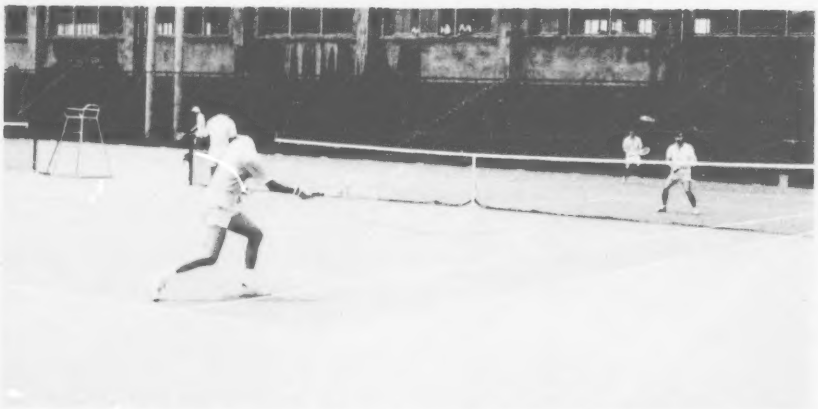
LABOR RELATIONS

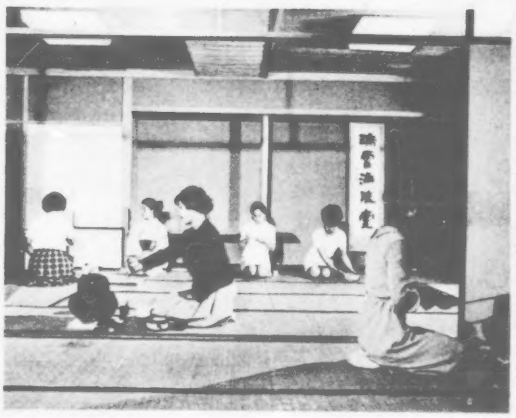
Labor Laws

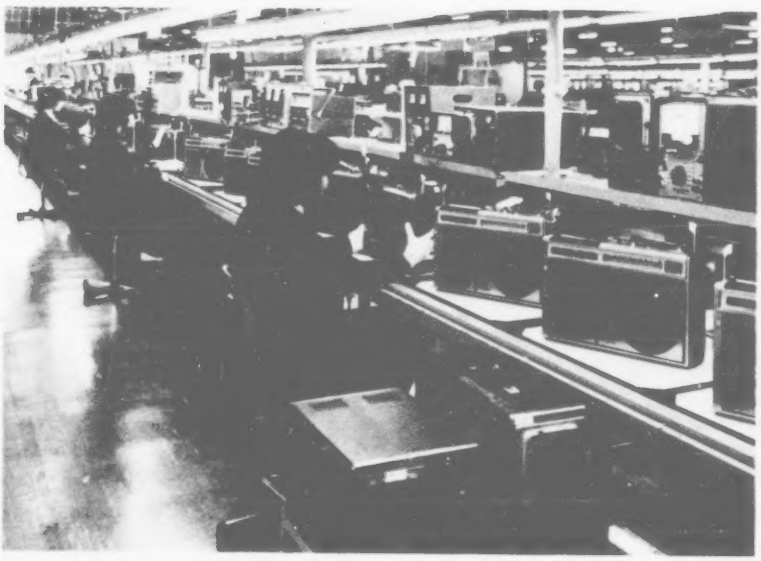
Japan's labor-management system underwent a reorganization after World War II with the enactment of new labor legislation along democratic lines. These labor laws include detailed provisions concerning the securing of modern and democratic labor-management relations as well as employment practices.

For example, the Labor Standards Law stipulates working hours, paid holidays,

(Top) A tennis court at a factory, part of employee recreational facilities provided by the company.
(Center left) Young office workers at a trading company; (right) counselling section for middle-aged and elderly job seekers at a public employment office.
(Below) Marchers in Tokyo's May Day parade.







safety and hygiene conditions, protection of women and young workers, and other minimum standards, which, generally speaking, are not inferior to those of other countries.

The Trade Union Law stipulates worker's right to organize and to bargain collectively, thereby guaranteeing labor unions the right to engage in democratic labor movements.

The Labor Relations Adjustment Law mainly stipulates detailed procedures for the adjustment of labor disputes (conciliation, mediation, arbitration, and emergency adjustment).

The Employment Security Law and other labor laws and regulations, such as the Industrial Safety and Health Law, Vocational Training Law, Law for the Promotion of Workers' Property Accumulation, Working Youth's Welfare Law, and Industrial Homework Law, also constitute the basic framework of Japan's industrial relations.

Labor Force

Japan's labor force in December 1981 numbered 55.8 million of which 2.1 per cent was totally unemployed. The principal distribution of the employed was as follows:

(Unit: 1,000 persons)

Agriculture, forestry, and fishery	5,570
Construction	5,440
Manufacturing	13,850
Wholesale, retail, finance, insurance, and real estate	14,740
Transportation, communication, and other public utilities	4,070
Services	10,300
Government	1,940

Through the 1960s, a significant change began to appear in the nature of Japan's employment picture with the tightening of the labor market. A labor shortage first began to be felt around 1959, despite the massive outflow of the farm population to the industrial sector. While demand for labor increased conspicuously during the 1960s and the early 1970s due to the rapid expansion of the Japanese economy, supply was limited because of the slow increase in Japan's productive-age population and the fact that increasing numbers of young people were continuing their studies in senior high schools and universities rather than finding employment after finishing lower secondary schools as had been the custom in earlier years.

The prolonged stagnation of economic activity since late 1973 has given rise to the new problem of over-employment within enterprises. As demand and production levels have fallen, more companies have reduced or suspended hiring of new employees, cut down working hours, and even laid off and dismissed workers. In contrast to the labor shortage during the earlier period of high economic growth, the current trend toward stabilized economic growth has brought about a labor surplus.

In May 1978, the number of the totally unemployed (i.e. registered job applicants who cannot find work) rose to a recent high of 1.23 million, creating an unemployment rate of 2.2 per cent, a figure twice the level of 10 years ago. However, with the recovery of the economy, the unemployment situation has improved since April 1979 and the number of the unemployed decreased to 1.19 million in December 1981.

Wages

Wage levels in nominal terms rose steadily by more than 10 per cent for almost every year in the 1960s and even more sharply in the early 1970s.

Average wages rose by 6 per cent annually during the 1955-60 period, by 10 per cent during the next five years, by 14.7 per cent between 1965 and 1970, and by an average of 17.2 per cent year form 1970 to 1973.

This increase was parallel to the growth

(Clockwise from top) Policewoman at a traffic control center in Tokyo; lessons in the tea ceremony for company employees; a radio-cassette assembly line; a cooking class at a municipal working women's center.

of the economy which averaged 11 per cent per year in real terms in the 1960s and more than 9 per cent per year from 1970 till 1973, though 1974 saw a minus GNP growth of 0.5 per cent in real terms.

Trends of Wage Levels (Nominal)

Year	All Industries		Manufacturing Industries	
	Index (1975=100)	Ratio of increase(%)	Index (1975=100)	Ratio of increase(%)
1970	42.4(73.1)	16.9(7.7)	43.7(75.3)	17.5(9.1)
1971	48.6(79.0)	14.6(8.1)	49.8(81.0)	14.0(7.6)
1972	56.4(87.7)	16.0(11.0)	57.6(89.6)	15.7(10.6)
1973	68.5(95.3)	21.5(8.7)	71.1(98.9)	23.4(10.4)
1974	87.1(97.4)	27.2(2.2)	89.7(100.3)	26.2(1.4)
1975	100.0(100.0)	14.8(2.7)	100.0(100.0)	11.5(-0.3)
1976	112.5(102.9)	12.5(2.9)	112.3(102.7)	12.3(2.7)
1977	122.1(103.4)	8.5(0.5)	121.9(103.2)	8.5(0.5)
1978	129.9(106.0)	6.4(2.5)	129.1(105.3)	5.9(2.0)
1979	137.9(108.6)	6.2(2.5)	138.7(109.2)	7.4(3.7)
1980	147.6(107.6)	7.0(-0.9)	149.9(101.1)	8.1(-7.4)

Note: Real wage index and increase ratio in parentheses.
Real wage figures obtained by balancing nominal wage indexes against the consumer price indexes.

Under the high economic growth policy, however, prices also rose at a rapid pace, registering an annual growth rate of 3 to 7 per cent during the 1960s and the beginning of the 1970s.

In 1973, the consumer price index showed an 11.7 per cent increase due to the oil crisis, which temporarily disturbed supply-demand relations. Furthermore, in 1974, in the midst of worldwide inflation, consumer prices registered an annual increase rate of 24.5 per cent, the highest since 1949.

Consumer Price Indexes

(1975=100)

Year	All items	Food	Housing	Fuel & light	Clothing	Miscellaneous
1972	64.3	61.3	67.1	65.3	62.9	68.1
1973	71.9	69.3	73.8	68.9	76.5	73.2
1974	89.4	88.5	93.2	88.1	94.3	87.4
1975	100.0	100.0	100.0	100.0	100.0	100.0
1976	109.3	109.1	106.2	107.2	107.5	111.7
1977	118.1	116.4	112.4	117.4	114.0	123.9
1978	122.6	120.5	117.3	115.8	118.0	129.9
1979	127.9	123.1	134.3	125.3	124.7	135.8
1980	137.2	130.5	145.3	167.2	131.6	152.2
1981	143.9	137.5	151.2	180.1	136.8	159.1

Prices first increased sharply mainly with regard to products of small-scale businesses and the primary industries and in the service sector as well as in agricultural marketing. Owing to effective counter-measures taken by the Government, the sharp increase in prices has relaxed since 1976. The consumer price index for March 1982 was 146.0 (100 in 1975), an increase of 4.0 per cent over the 1981 figure for the same period.

Nevertheless, nominal wages rose well above consumer prices, and real wages (actual purchasing power of wages) have also shown a steady increase during the past decade. This increase was an average of 4.4 per cent per year between 1955 and 1960, 3.6 per cent during the 1960-65 period, 8.8 per cent from 1965 to 1970, and 9.5 per cent for the 1970-73 period. The increase rate of real wages since 1973 has been low in spite of the marked gain in nominal wages.

Workers' wage increases come about because of several factors, such as (1) annual increases resulting from collective bargaining, (2) increased term-end payments ("bonuses") for the past half-year, and (3) regular annual wage adjustments regardless of work content, job changes, or skill level.

The most important of the above three factors is the first. Since 1955, annual labor-

Monthly Wages by Industry

(Unit: yen)

Year	All industries	Construction	Manufacturing
1975	177,213	158,045	163,729
1978	235,378	218,758	214,575
1981	279,096	271,705	259,729

Wholesale and retail trade	Finance and insurance	Real estate	Transport and communication	Electricity, gas, and water	Service
164,958	206,979	190,701	198,969	241,039	202,465
214,887	287,765	245,622	260,770	304,201	263,503
251,291	346,494	301,296	300,993	362,918	300,704

Note: Average monthly cash earnings per worker, including basic salary and special cash payments, for regular workers at establishments with 30 or more employees.

management collective bargaining sessions, which are basically conducted within each company, have come to be termed the "Spring Labor Offensive", as labor unions' demands for higher wages are staged in February or March each year and the new agreements take effect in April or May. Such confrontations led to large annual wage increases in the past, and also benefited non-organized workers, but recently gains by the "Spring Labor Offensive" have been lower than what they used to be due to the lower growth of the economy.

Employment System

Japan's employment system is noted for a number of rather unique features. One is "lifetime employment", where workers who enter a company directly after finishing education normally remain there until reaching the retirement age. Wage increases are granted regularly according to the length of service.

Throughout his working life, an employee is likely to receive semi-annual "bonuses" or "special cash earnings" in addition to wages, overtime payments and allowances. In 1981, the average total bonus payment for all industries amounted to the equivalent of 4.3 months of the regular wages.

Another unique feature is the variety of company-sponsored welfare programs and facilities, the so-called "fringe benefits," which range from retirement allowances and medical insurance to dormitories and housing, child-care, discount stores, as well as medical, educational, and recreational facilities. In 1980, the ratio of monthly welfare expenditure per employee to total cash payments was 14.9 per cent on an all-industry average.

Labor Unions

In June 1980, there were 72,693 labor unions with a total of 12,369,000 members, representing 30.8 per cent of the total employees.

A feature of Japan's labor movement is that in most cases the unions are organized on a vertical rather than a horizontal basis. In other words, unions are in general based on a single enterprise, embracing workers of different occupations in that enterprise rather than covering workers of the same occupation in different enterprises on an industry-wide basis.

The majority of Japan's trade unions are affiliated with national federations or associations, of which the two biggest are Sohyo (General Council of Trade Unions of Japan) and Domei (Japanese Confederation of Labor).

The principal members of Sohyo are the public workers' unions, such as the All-Japan Government and Public Workers' Union, the National railways workers' Union, and the Japan Teachers' Union.

Domei derives its main support from unions in private industry, principally the National Federation of Textile Workers' Unions, the National Federation of Metal Industry Trade Unions, and the Japan Seamen's Union.

The membership of the different national union groups in June 1980 was:

(Unit: 1,000 persons)

Sohyo (General Council of Trade Unions of Japan)	4,551
Domei (Japanese Confederation of Labor)	2,162
Shin Sanbetsu (National Federation of Industrial Organizations)	62
Churitsu Roren (Federation of Independent Unions)	1,358
Other independent national unions	1,627

The basic unit of labor union organization and activity is the individual enterprise union. The union in each company or plant enters into its own labor contract. Industry-wide federations of unions serve as coordinators and information sources, as well as guidance bodies for the individual unions.

These federations formulate the standards for labor's demand for wage increases, and based upon this each local union makes its own demand to management. The progress of these separate discussions is carefully watched by the particular federation concerned and its member unions. When neces-

sary the organization formulates union tactics and guides their implementation. These can include refusal of overtime work, workshop rallies, one or two-hour walkouts, and strikes of limited duration. The implementation of such tactics does not indicate that negotiations have become deadlocked but rather they are used to exert pressure and thus strengthen the union's bargaining position.

When a leading company in a strong financial position can be brought to concede a substantial raise in wages, especially if it is an influential concern in business circles, the labor federation will seize upon this example and use it to influence other bargaining in progress. Using such tactics, major unions usually wind up their push for higher wages by the end of April, through the collective bargaining sessions of the "Spring Labor Offensive." Although efforts are made to carry out industry-wide collective bargaining with the help of industry-wide labor federations, final decisions are left up to the unions based on the individual enterprises.

This form of collective bargaining has generally fostered a desire among enterprise unions to deal realistically with management in a way befitting the actual state of each enterprise and to maintain a cooperative relationship with management in order to ensure the prosperity of the enterprise to which they belong.

FAMILY LIFE

Postwar Changes

Profound changes have occurred since the end of the war and are continuing to occur in Japanese family life. Postwar democratization has infiltrated into every aspect of family life, bringing about various innovations.

A series of measures to democratize the nation's family system were carried out shortly after the war. For example, the Civil Code was revised in 1947 to give women equal legal status with men in all phases of life and to abolish the old patriarchal character of the family.

At the same time, the recent rapid growth of Japan's economy also had a major impact on daily living patterns. The changes in the cultural and living environment due to advanced urbanization and technological progress have served to strengthen the general tendency toward smaller family units, consisting basically of the immediate parents and children, as opposed to the large family unit of prewar years. In recent years, however, a reappraisal of the larger family unit has apparently been taking place as evidenced by an increase in the number of households in which parents live with their married children.

The widespread practice of family planning in the postwar years has reduced the average number of children per couple to 1.8 in 1981, as against 3.6 in 1950.

Both husband and wife enjoy equality under law, with equal rights in contracting marriage, in inheriting and owning property, and in suing for divorce.

Mode of Living

The mode of living has also changed under the influence and widespread use of modern household appliances together with the mass production of instant food preparations, an expanding supply of frozen foods, ready-made clothes and other apparel, and various sorts of daily necessities.

During the 1960s, marked progress was registered in equalizing living standards

(Top) A family enjoying skiing at a ski resort. (Below left) A family in a modern home setting; (right) a young couple playing with their children at a park in Tokyo.

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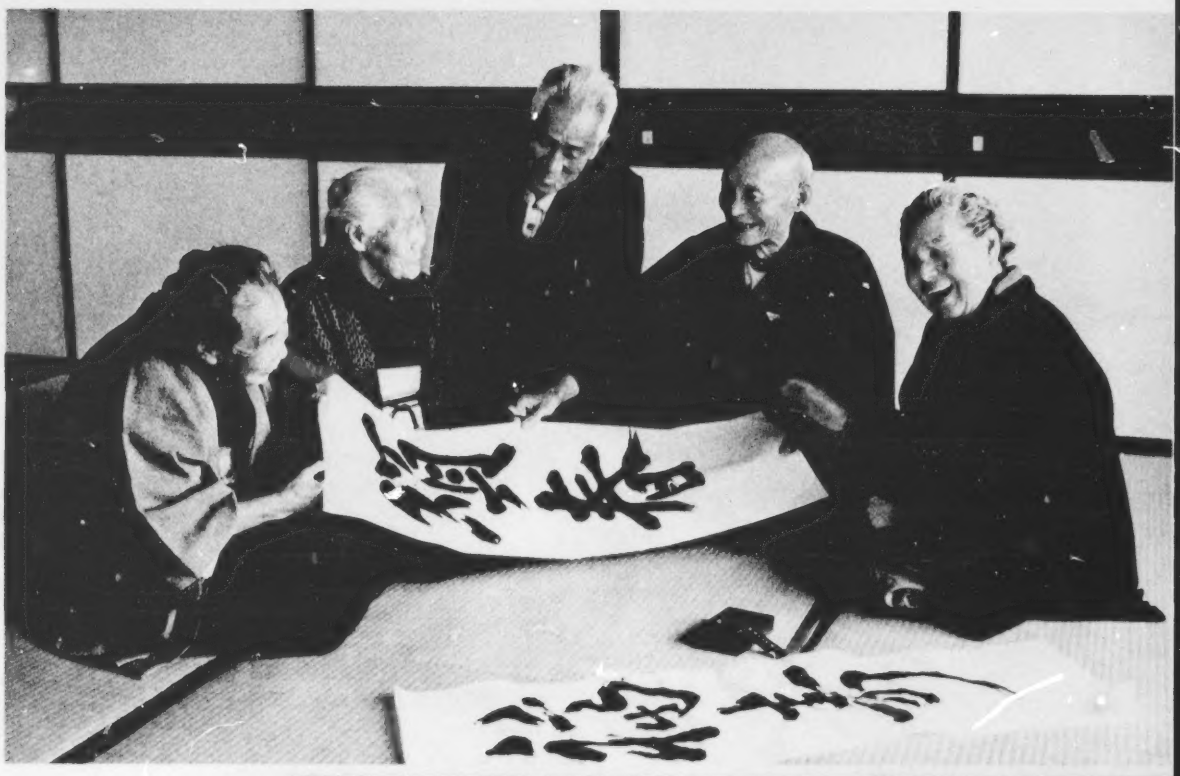


throughout the country and a much greater selectivity developed in the choice of merchandise as well as in movement and leisure.

This has made possible additional time for relaxation as well as educational and cultural pursuits for the entire family, especially the wife, who was previously "tied down" to her daily household chores. Thus, with a lighter household load and increased leisure time, more and more married woman have entered the labor force, although this tendency stemmed partly from the tight labor market during the nation's fast economic growth in the recent past, especially in the 1960s.

The rationalization of living patterns and general leveling of incomes and consumption levels, plus a change in the pepole's social awareness brought about by the abundant supply of information from publications and television, has resulted in a growing "middle-class consciousness" among the people as whole.

Consumption patterns indicate this new attitude. As of March 1981, 99.2 per cent of all Japanese households owned refrigerators, while 98.5 per cent color television sets, 95.4 per cent vacuum cleaners, 58.5 per cent stereo-phonic record players, and 41.2 per cent air conditioners. One out of every 5.4 Japanese owned a passenger car in March 1981.

At the same time, the geographic sphere of leisure activities has expanded and people now travel the entire length of Japan for leisure, while the number of Japanese going abroad for pleasure increased greatly in the late 1960s and 1970s, numbering approximately 3.3 million people in 1981, or 3.22 times that of 1972.

⇦ *(Top) Old folks admiring works of calligraphy at a municipal welfare club for the elderly.*
(Below) Physical check-up for 3-month-old babies at a local health center.

Household Economy

Japanese consumers today enjoy a level of material affluence they did not dream of in the 1950s. According to a government survey, from 1977 to 1980 the average income of Japanese households grew at an average nominal rate of 16.9 per cent per year. The real increase rate, adjusted to reflect the rise in the consumer price index, however, stood at 5.1 per cent during the same period.

According to government statistics, the average monthly income per household (3.83 persons on the average in 1980) reached ¥350,000 ($1,544) in 1980 and the real increase rate was 2.2 per cent over the previous year. Monthly living expenditures per household averaged ¥230,568 ($1,017) in 1980, showing a 2.3 per cent real increase (or 7.4 per cent in nominal terms) over the previous year.

Employed workers' households spent slightly more than this national average with ¥238,126 ($1,050) per month, and the share of food in their total living expenditures stood at 27.8 per cent; fuel and light 5.3 per cent; and other miscellaneous items 50.4 per cent.

The household savings have increased yearly along with the increase in income. As of December 1980, approximately 99.7 per cent of all households in Japan had some form of savings and savings per household averaged ¥5.8 million ($25,552), an increase of 11.2 per cent over the previous year.

Consumer psychology, chilled by the oil crisis and the subsequent spiraling inflation, started to warm up slowly by 1976. But, instead of buying goods and services just by way of keeping up with their neighbors as during the "high growth" period of the economy, Japanese consumers are now conducting their personal or family finances more individually, showing a new consumption pattern of more personalized, selective, and non-emulative spending according to their different tastes and to the means available.

Women in Society

The number of women attending institutions of higher learning has shown a marked increase every year. Today, 33.5 per cent of all female high school graduates proceed to junior colleges and universities. Altogether, there were 735,977 female college and university students in 1980, representing some 33.4 per cent of the total number of college and university students. The number of female students increased by 56.5 per cent during the ten years between 1970 and 1980.

Before the war, many girls who had graduated from girls' high schools stayed at home and waited for their parents to find suitable husbands for them. Today, it has become an accepted social norm that young women work at least for a few years before marriage; among university graduates, an increasing number of women are taking up careers following their studies, although it is still less frequent for them to find employment in managerial posts equal to their qualifications and abilities.

The number of women in the labor force reached 22,090,000 in 1981, representing 47.7 per cent of the female population of 15 years and over and 38.7 per cent of Japan's total labor force. The number of women employees in industry has risen steadily from around 3 million in 1948 to over 22 million in 1981. Although most female workers leave employment after marriage, recent trends indicate that more married women are remaining at work at least for the first years of their married life. This fact of longer employment plus the increasing number of highly educated women workers is contributing to raising both the prestige and the wage level of women employees. The principle of equal pay for equal work was established in 1947 by the Labor Standards Law, and in 1967 the Government ratified the ILO Convention No. 100 on "Equal Remuneration."

Participation of women in various social activities through membership in one or more organizations is also contributing to the improvement of their status in the community and the elevation of their educational level. According to a Ministry of Education estimate (1978), 22.5 per cent of all Japanese women above the age of 20 belong to at least one organization for women, and in 1980 there were about 37,430 women's organizations throughout the nation, such as the National Council of the Federation of Regional Women's Clubs, the College Women's Association of Japan, the Japan Housewives' Association, and the YWCA.

SOCIAL SECURITY

The Ministry of Health and Welfare and its Social Insurance Agency have the major administrative role in the nation's social security programs. Local governments on prefectural and municipal levels provide the day-to-day social security services through their welfare departments, welfare offices, and various counseling centers.

Japan's social security programs are basically a combination of income security, mainly provided through social insurance and public livelihood assistance, medical care security through health insurance, and public welfare, including services for the aged, physically and mentally handicapped, and children lacking a normal home life.

These various welfare programs cover a wide range of aspects in the people's daily life, and are now approaching the same high level as those of the advanced welfare states of Western Europe, Scandinavia, and Oceania as far as coverage and kinds of programs are concerned.

Social security projects have been high on the Government's list of priorities. In the 1981 budget (initial), the Government allocated ¥8,837 billion ($40.1 billion) for social security purposes, or 19.8 per cent of the total General Account Budget.

Total payments for the nation's social security programs for fiscal 1980 amounted

Trends of Social Security Payments

Fiscal Year	Payments (Unit: ¥1,000 million)			Ratio to national income (%)		
	Total	Medical care	Cash benefits	Total	Medical care	Cash benefits
1965	1,603.7	913.7	690.0	6.1	3.5	2.6
1970	3,523.9	2,075.8	1,448.1	5.8	3.4	2.5
1975	11,681.4	5,688.1	5,993.3	9.4	4.6	4.8
1978	19,721.3	8,866.1	10,855.2	11.8	5.3	6.5
1980	24,604.4	10,658.2	13,946.2	12.7	5.5	7.2
($billion)	(108.5)	(47.0)	(61.5)			

Trends of Social Security Benefits Classified by System

(Unit: %)

Fiscal Year	1965	1970	1975	1978	1980
Total payments	100	100	100	100	100
Medical care insurance	18.3	30.5	42.2	39.0	38.0
Pension insurance	9.6	13.5	24.9	31.1	34.0
Unemployment insurance & workers' accident compensation insurance	11.0	8.2	8.7	7.0	6.3
Children's allowance	—	—	1.2	0.9	0.7
Public assistance	8.5	7.8	5.8	5.3	4.7
Welfare services	3.0	3.8	6.5	6.5	6.5
Public health & sanitation	6.2	5.1	2.8	2.3	2.0
Old public service pensions under the 1923 law	12.3	9.7	7.5	7.6	7.5
Aid for war victims	1.1	1.3	0.4	0.3	0.2

to ¥24,604 billion ($108.5 billion), comprising ¥10,658 billion (or 43.3 per cent of the total) for medical care and ¥13,946 billion (56.7 per cent) for various cash benefits under income security and welfare service programs. This total represents a 12.3 per cent increase over the previous year and constitutes 12.7 per cent of total national income for the same fiscal year, the ratio itself showing an increase over the previous year's 8.9 per cent.

Total payments for fiscal 1980 were 7.0 times as large (in nominal value) as the corresponding figure for fiscal 1970 and 15.3 times that of fiscal 1965, showing the overall expansion of social security programs in recent years. This uptrend reflects the improvement and expansion of social security measures from fiscal 1971 and the maturing of the pension system (relative increase in beneficiaries).

Of total social security benefits, cash benefits have surpassed medical care benefits since 1975, indicating a change in the structure of Japan's social security system. By individual system, the weight of pensions showed an upward tendency, while the proportions of medical care insurance registered downtrends.

Background

In Japan, the elderly population requiring more-than-average social welfare assistance is still small compared with Western nations. As of 1981, people aged 65 or over numbered 10,940,000 or 9.28 per cent of the total population (comparable recent figures are 15.9 per cent for Sweden, 15.3 per cent for the Federal Republic of Germany, and 11.2 per cent for the United States).

This enables Japan to spend a smaller portion of its total national income on social security benefits than do these nations. Indications are, however, that the aged population will soon show a sharp rise, which in turn will bring about a substantial increase in payments for both medical care and pensions.

As a result of the Japanese employment system of lifetime employment and the seniority wage system, coupled with a traditional tendency in Japan to attach great importance to human relations, non-obligatory welfare programs undertaken by companies for their employees over and above the scope required by law are quite extensive both in scale and variety.

Moreover, the retirement allowance paid by companies is playing no small part in old-age security in Japan. Such payments to employees retiring according to the age limit system average ¥16.4 million ($77,970) per capita in the case of university graduates.

Life insurance in Japan has a maturity period of about 30 years in most cases, and at the end of this period, a sum about equal to the total premium payment plus interest is paid to the policyholder in a lump sum by way of a fund for old-age security. Private

life insurance policyholders are also accorded generous tax benefits by the Government. As there are many farmers and self-employed persons besides company employees, private insurance plays no small role in providing stability for the people's life in addition to the public social security system.

Family solidarity still remains relatively strong in Japan, contributing in large measure to the stability of the people's lives.

For instance, it is still usual for old parents to live with their children. A 1981 survey showed that 76.8 per cent of the population aged 65 or over was living with their children. In many cases, moreover, children living separately from their aged parents give them financial aid. This strong sense of solidarity also exists among blood relations, such as brothers and sisters, who are often ready to help each other in time of emergency or hardship, contributing to the comprehensive stability of the people's lives to great extent.

In order to encourage such solidarity, the Government has set up tax privileges for those supporting old people and is also carrying out plans to build public housing specially designed for parents to live with married children.

Social Insurance

The social security system in general depends in large part on social insurance for both pension schemes and medical care. Social insurance is basically divided into an occupational one for employees of public and private organizations and community insurance for others including the self-employed.

Occupational social insurance for both pensions and medical care is further divided into numerous categories depending mainly on the different grouping of the insured's occupation and the organization he belongs to.

The different social insurance programs were established at various times during the past century, starting with pension schemes for military personnel and central government employees instituted in the late 1800s. Thus the whole social insurance system in Japan at present is a cumulative and inevitably very complex one.

With a view to integrating the present eight public pension plans, a comprehensive "basic pension" system is now under study by an advisory group to the Minister of Health and Welfare. Under this system, those of a set age and over, for instance, would be equally eligible, under certain conditions, to receive a fixed old-age pension.

Medical Care Security

Japan's medical care security system centers on the health insurance system and the public assistance program for medical care as financed by the general revenues of the national and local governments.

The latter, as a part of income security and welfare services, as well as of public health measures, is an administrative supplement to the health insurance system. In addition, there is a workers' accident compensation system for sickness and injury due to industrial accidents.

Health Insurance

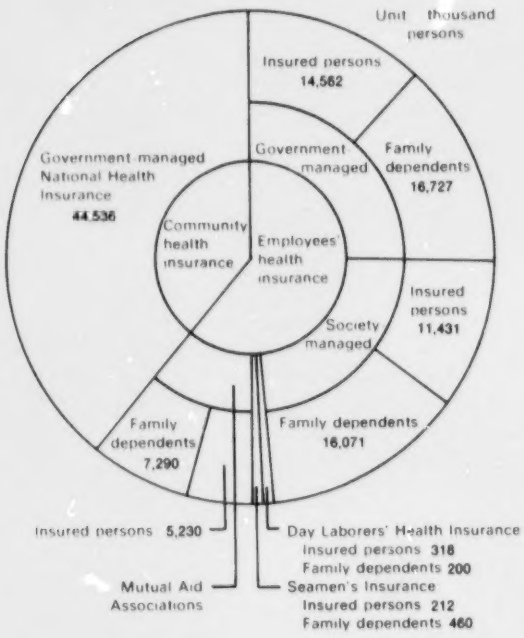
Since 1961 the Japanese people have been universally covered under some kind of health insurance program, which provides medical treatment, free of charge or with the payment of a small fee, to the insured and their dependents, in addition to various health-related allowances.

The present health insurance system consists of eight different plans, reflecting the fact that Japan's social insurance system was largely formed and developed on a group-by-group basis based on place of work. Roughly, the current system is divided into employees' insurance for employed persons, and community insurance for other regional residents.

As employees' insurance, there is, first of all, the extensive health insurance system

Number of Insured Persons as Classified by Health Insurance Plan (As of March 31, 1981)

Total number 117,037,000 persons



for employed persons in general. This general insurance plan for employees is further classified into two categories – namely, Government-managed health insurance mainly for employees of medium- and small-sized enterprises with the Government serving as insurer, and a society-managed health insurance, for which a Health Insurance Society jointly organized by management and employees of a big enterprise or of a group of enterprises in the same trade serves as insurer.

Secondly, there are health insurance plans for employees in particular fields of work – that is, Seamen's Insurance, and four Mutual Aid Associations for national public service personnel, local public service personnel, public corporation personnel, and private school teachers and employees.

The community health insurance program is called the National Health Insurance, and it is for those persons who are not covered by any of the above-mentioned insurance plans for employees. It is managed by either local authorities (cities, towns or villages) or the National Health Insurance Associations, each formed by a group of persons engaged in the same occupation, such as doctors or carpenters.

Benefits and Finance

The benefits of health insurance consist of defrayment of medical expenses and cash. The benefit ratio (ratio of benefits to total medical expenses) for employees' health insurance is 100 per cent for the insured (excepting partial liability of ¥800 ($3.64) as an initial fee at the beginning of medical treatment and ¥500 ($2.27) a day for the first month of hospitalization) and 70 per cent (30 per cent to be paid by the patient) for family dependents. As for National Health Insurance, the benefit ratio is 70 per cent for both the insured and family dependents.

In the case of the 70 per cent benefit ratio, if a patient's share of medical expenses exceeds a certain limit, the excess is reimbursed under the respective health insurance plans.

Cash benefits supplied under the health insurance system include sickness and injury allowances and a maternity allowance to compensate for the loss of income due to temporary incapacitation. There are also lump-sum payments, such as childbirth expenses, nursing allowances, and funeral expenses. Furthermore, health insurance societies and mutual aid associations provide additional benefits to cover that part of medical costs which is not met by standard health insurance set by law.

The costs of health insurance are covered mainly by premiums and subsidies from the national treasury. As regards employees' health insurance, the premium is calculated in proportion to the remuneration of the insured person (up to a certain limit) and paid by both the employer and the employee. As for National Health Insurance, the premium (which takes the form of an insurance tax in the case of some local governments) is fixed according to the income, assets, number of members, etc., of the household covered,

although standards differ from local government to local government.

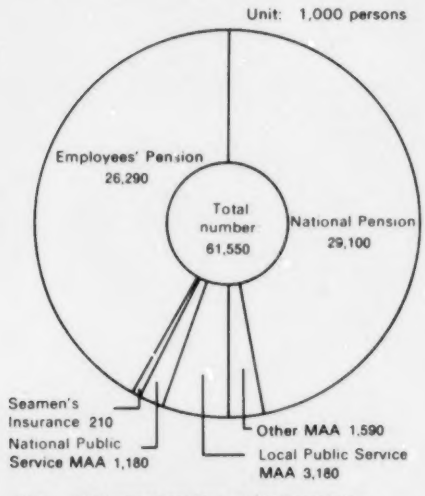
Income Security

Japan's income security programs consist mainly of old-age, survivors (widows and orphans), and disability pension plans that fall under various social insurance schemes. Loss of income due to industrial accidents and unemployment are covered under the workmen's accident compensation insurance and employment insurance, respectively. Loss of income as a result of illness or childbirth is covered by benefits under the health insurance system. Furthermore, a children's allowance is provided to cover special expenses. These benefits are supplemented comprehensively by various benefits under the livelihood assistance program, which is a form of public assistance.

Pension Plans

Existing public pension plans consist of eight different plans. That is, as employees' pensions, there are Employees Pension Insurance for employees in general and other pension plans for groups of particular occupations—Seamen's Insurance and those for five Mutual Aid Associations, including one for national public service personnel. Besides these employment-oriented pension plans, there is also a comprehensive community plan for non-employees, called the National Pension.

Persons Covered by Public Pension Insurance Plans (As of March 31, 1981)

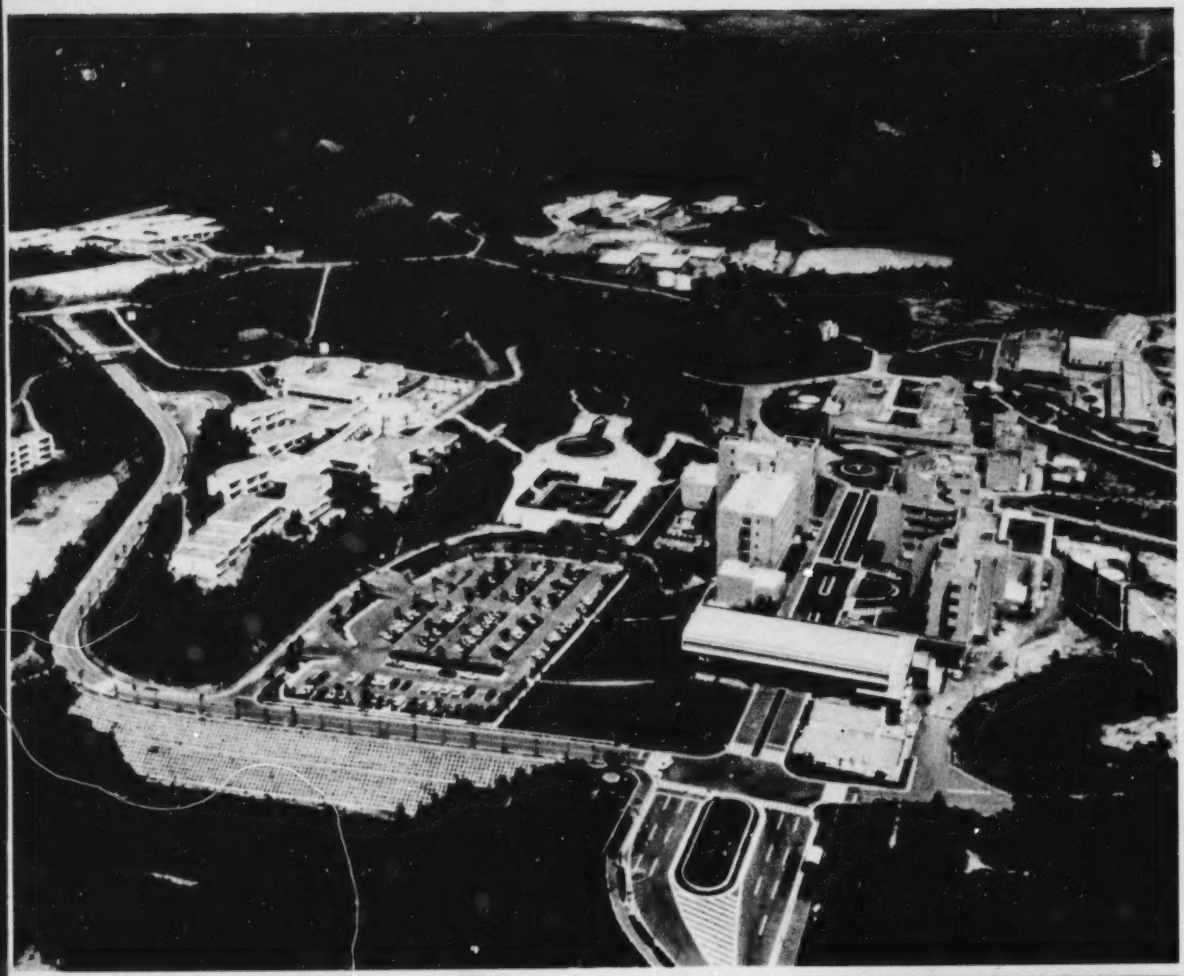


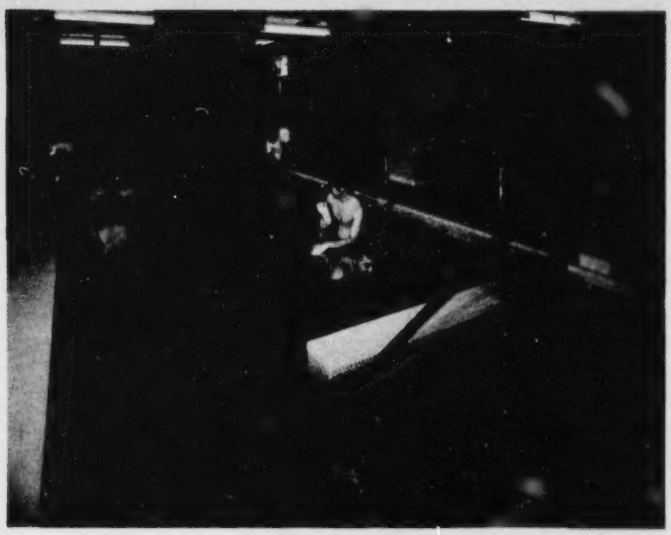
Note: MAA stands for Mutual Aid Association.
Source: Prime Minister's Office "Statistical Yearbook on Social Security"

Benefits and Finance

These pension plans vary in the starting age for benefit payment, premium levels, etc. They also differ in the method of calculating the amount of the pension. For instance, the National Pension is based on a fixed amount formula providing for a uniform pension. By contrast, the Mutual Aid Associations' pension is proportional to the remuneration of the insured person, so that the pension reflects the recipient's past standard of living. But these two methods are mixed in the Employees' Pension. In spite of their differences, the Employees' Pension and the National Pension plans are interrelated with each other in regard to the standard of benefit. Namely, the former's average pension is about equivalent to the benefit a married couple receives from the National Pension plan. The standard of benefits has been repeatedly raised in recent years in consideration of rising wages and the national standard of living. Especially in 1973, the benefits of both the Employees' Pension and the National Pension were improved substantially, when the standard pension under the Employees' Pension for

(Top) Aichi prefectural welfare center for the physically and mentally handicapped, the largest institution of its kind in Japan.
(Below left) Home-helper visiting an elderly invalid couple; (right) nurse from a local health center visiting a new mother. ⇨





those who had contributed for 28 years was fixed at 60 per cent of the average standard remuneration (about 45 per cent of total remuneration inclusive of seasonal bonuses), and a sliding scale payments system was introduced, to cope with rising prices. As a result, the standard pension benefit rose to ¥107,858 (about $492) a month in 1979. The standard benefit according to the National Pension was also increased to about ¥88,450 (about $404) a month for married couples. With these improvements, the standard of Japan's old-age pension is already equal to those of Western nations in terms of percentage of the average wage (in the manufacturing industries).

However, the number of recipients of the benefits is still comparatively small in Japan, mainly because these pension insurance plans are fairly new, with the exception of the long-established pension schemes of the Mutual Aid Associations, such as the one for government employees.

Financial resources for these various pensions are premiums from the insured, subsidies from the national treasury, and income accruing from the operation of the pension fund. As for employees' insurance, the premium amount is calculated in proportion to the remuneration of the insured person (within limits) and shared by both the employee and the employer. As for the National Pension, however, the pension is paid according to a fixed amount formula.

Welfare Pension

The elderly over 70, widows with children, and the disabled who were not covered by any contributory pension insurance plans or otherwise not qualified to receive these pension benefits as of November 1, 1959, when the National Pension Insurance plan was established, are entitled to receive benefits under the non-contributory welfare pension plans. The welfare pension is entirely paid out of the national Government's General Account Budget.

Public Assistance

The public assistance program consists of seven assistance plans, namely, livelihood aid to pay for daily necessities, medical expense aid including expenses for hospitalization, and other aid categories for children's education, housing, maternity, occupational training, and funeral services.

For these public assistance programs, which are administered by the local Welfare Offices, the national Government provides about 80 per cent of the cost of assistance with the remaining 20 per cent coming from local governments.

The Ministry of Health and Welfare sets the standard scale of assistance for each category of aid based on income, family composition, and other factors of household as well as regional differences. In the case of metropolitan areas, the assistance benefit stood at ¥134,976 (about $614) a month for a standard family of four in 1981 or 65.7 per cent of the general wage level. Actually, however the ratio was higher than this because of other special aid and additional allowances supplied in addition to livelihood assistance. In fiscal 1981, 768,000 households or 1,435,000 persons received livelihood assistance–that is, 12.3 persons per thousand population.

Welfare Services

Since the end of World War II, a series of laws systematizing welfare services in various fields has been enacted in rapid succession, including the Child Welfare Law, the Law for the Welfare of Physically Hand-

⇦ *(From top) Swimming pool therapy for the physically handicapped; waiting room of the dispensary at a large hospital; rehabilitation center for the phsically handicapped.*

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icapped Persons, the Law for the Welfare of Elderly Persons, and the Maternal and Child Welfare Law.

Besides building and maintaining day nurseries, children's centers, and children's playgrounds, children's welfare services include, among others, subsidies for medical costs for handicapped children.

Services for the mentally and physically handicapped include supply (lease) of instruments to help severe cases of physical handicap to make their daily life easier, provision of a welfare allowance in severe cases of mental retardation and physical handicap, grants of special child support allowances to parents and guardians of severe or moderate cases of mental retardation or physical handicap aged less than 20, and dispatch of home helpers to families caring for severe cases of mental retardation or physical handicap to assist with household chores and nursing.

As for services for the elderly, free physical examinations of persons aged 65 and over are provided for the prevention and early discovery of sickness. Since 1973, a system of free medical service for those aged 70 and over (65 and over for the bedridden) has been in force. In this program, that part of the elderly's medical costs which is not covered by health insurance is paid out of public funds. Further, home helpers are dispatched to the homes of bedridden old people, while "welfare telephones" are lent free of charge to aged people living alone to make it possible to check on their safety and to offer counseling and comfort. In addition, to keep the life of the elderly healthy and satisfying, subsidies are granted to old people's clubs, and programs are carried out to encourage recreational and sporting activities among them.

In recent times, services designed to help the handicapped in their own homes have assumed increasing importance. In this respect, welfare facilities, no longer limited to the accommodation of handicapped persons, are now more widely used for the welfare of local residents. These facilities are mobilized, for instance, to help the elderly in their homes through such programs as a meal service for the aged.

Facilities

Welfare facilities are established and managed by national or local governments, statutory private social welfare bodies and other organizations. The national Government pays or subsidizes the costs of building and/or running these facilities. In some cases, fees are collected from those persons admitted to the facilities who can afford such payments.

MEDICAL SERVICES

The health standard of the Japanese people has shown phenomenal improvement in recent decades. Their average life span was only about 45 years for both males and females up to the 1920s, but it reached 73.32 years for males and 78.83 years for females in 1980, ranking with the world's highest levels found in the Scandinavian countries. This came about against the background of progress in medical science, better pharmaceutical and medical care techniques, improvements in nutrition, and the development of the medical care and public health systems. One of the immediate causes was effective measures against infective diseases, such as tuberculosis, dysentery, and pneumonia. Particularly notable was a sharp decline in infant mortality–that is, down from 60.1 per thousand births in 1950 to 7.5 per thousand births in 1980.

The Government stresses the importance of preventive medicine and had established 855 health centers throughout the country by April 1982 as a means of improving environmental sanitation and preventing the spread of communicable diseases in their early stages.

By contrast, there has been an increase in deaths due to the so-called degenerative diseases, such as cerebrovascular diseases, cancer, and heart disease, which are closely related to the aging of the population. Their ratio to death totals leaped 2.4-fold from about 25 per cent in 1950 to almost 61 per cent in 1978, nearing the ratios of Western nations. In Japan, however, the death rate due to cerebrovascular diseases continues high, whereas the death rates due to heart disease and cancer are relatively low.

The number of doctors and dentists per 100,000 population was 156.2 and 53.6 respectively at the end of 1980, indicating that Japan's standards are now on a level more or less similar to Western nations that are advanced in public welfare. However, ratios vary by locality, being high in urban districts while insufficient in the remote inland areas or distant islands.

In recent years, there has been phenomenal progress in such medical aspects as ICU (intensive care unit), external dialysis, brain surgery, and cardiosurgery. As a result, medical care service has become increasingly labor-intensive because of the need for teamwork among many highly specialized medical fields. The number of medical service personnel per 100 hospital beds increased by about 29 per cent from 57.8 persons in 1966 to 74.7 persons in 1980. Above all, nurses and other nursing personnel showed the largest increase. Also notable was a conspicuous increase in technical personnel, such as clinical laboratory tehnicians, radiology technicians, physiotherapists, and occupational therapists.

Medical facilities have also been increased and improved. During the past 10 years, the number of hospitals has risen by about 10 per cent, and that of hospital beds by about 2.5 per cent. In 1980, Japan had 112.9 hospital beds par 10,000 population or much the same as the levels of Western nations. Parallel to the improvement in ordinary medical facilities, great emphasis has also been placed in recent years upon the expansion of medical facilities having special functions, such as for medical care in remote areas, emergency medical service, and highly specialized medical treatment for cancer, cerebrocardiovascular diseases, etc.

The following statistics give a picture of Japan's health services:

Number of Hospitals (1980)

Hospitals	
General	8,003
Communicable disease	20
Leprosy	16
Tuberculosis	39
Mental	977
Total	9,055
General clinics	77,611
Dental clinics	38,837

Health Personnel (1980)

Practicing physicians	156,235
Dentists	53,602
Pharmacists	116,056
Public health nurses	17,957
Midwives	25,867
Clinical nurses	476,253

Nutrition

Since the end of the war, a major change has been brought about in Japanese dietary habits throughout the country, more or less approaching the pattern of the Western nations. For example, more Japanese now take toast and coffee for breakfast, though many still prefer traditional dishes with boiled rice, soy-bean paste soup, and pickled vegetables.

With the elevation of living standards after the early 1950s, the nation's level of nutrition has been remarkably improved. The excessive consumption of cereals has diminished with an increasing consumption of meat, milk, and dairy products. While expenditures of urban households on foodstuffs increased in absolute terms, the Engel's coefficient declined from 44.1 in 1959 to 28.8 in 1981 due to the relatively greater increase in total expenditures.

The average Japanese consumed 2,084 calories and his intake of protein reached 77.9 grams per day in 1980. Of the total

protein intake, 26.5 per cent came from cereals (including 18.4 per cent from rice), 9.6 per cent from pulses, 23.1 per cent from fish, 14.8 per cent from livestock products, 11.0 per cent from eggs and milk, and 15 per cent from others.

HOUSING

According to the October 1978 national survey conducted by the Statistics Bureau of the Prime Minister's Office, there were some 35.5 million dwellings for 32.8 million households, including single persons.

Number of Dwellings

(Unit: 1,000)

Survey year	1968	1973	1978
Dwellings (A)	25,591	31,059	35,451
Households (B)	25,320	29,651	32,835
A/B	1.011	1.047	1.080

The same survey figures show that the total of 32.2 million occupied dwellings (3.3 million dwellings were unoccupied at that time) consisted of 19.4 million owner-occupied units, 2.4 million rental units owned by governmental and public organizations, 8.4 million privately-owned units for rent, 1.8 million units owned by enterprises for their employees, and 0.2 million others, including rented rooms and lodgings.

The average number of rooms per dwelling as of the same date was 4.5 (4.2 rooms for the Federal Republic of Germany, 4.8 rooms for the United Kingdom, and 5.1 rooms for the United States), and the average size of dwelling space was 80.3 square meters compared with 79.5 square meters for France (1974), 86.0 square meters for Austria (1976), 95.3 square meters for the Federal Republic of Germany (1976).

With a sufficient number of dwellings having been secured, the housing problem has now shifted from the question of quantity to that of quality. A housing survey conducted by the Prime Minister's Office in 1978, in which 35.3 per cent of all the households in Tokyo and other major cities voiced dissatisfaction with the size of their houses, indicated that the people's demand for spacious housing is still strong.

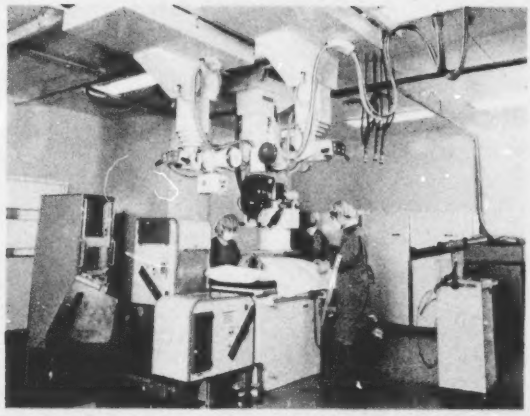
Strenuous efforts have been made, starting immediately after the war, to relieve the serious housing shortage and improve housing standards. In 1950, the Housing Loan Corporation was established to advance long-term loans at low interest rates to individuals who wished to build their own houses. The Japan Housing Corporation was established in 1955 to construct multi-storied concrete apartment buildings on a large scale in and around the bigger cities where the housing shortage was most severe.

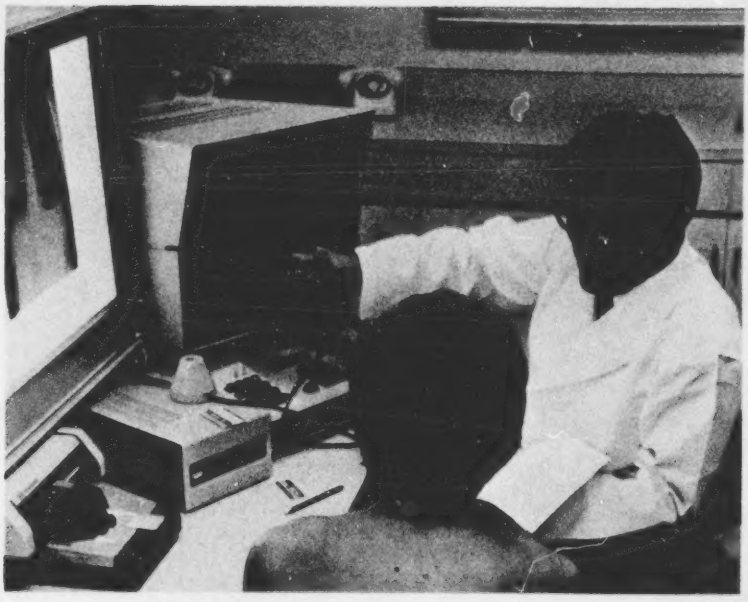
As for long-term planning, the Government initiated in 1966 the first five-year Housing Construction Program based on the Housing Construction Program Law of the same year. The number of units constructed totaled 2.57 million units with public funds and 4.17 million units with private funds.

Under the second and third five-year plan (fiscal 1971～1980), a total of 15.96 million units (6.77 million with public funds; 9.19 million with private funds) were constructed.

The fourth five-year plan began in fiscal 1981. It stresses better housing quality and by 1985 aims at constructing 7.7 million units that are adequate in size, structure, and facilities (e.g. the dwelling space of 86

(Top left) Entrance to a university hospital; (right) treatment room for cardiovascular radiology.
(Center right) Doctor using a computer to examine a patient.
(Below) Emergency care for a patient flown in from an isolated island. ⇨





海上自衛隊
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国立長崎中央病院

square meters for a family of four).

Although housing construction carried out by local governments and the Japan Housing Corporation has been slightly delayed, the plan is marking overall smooth progress.

Local governments, the Japan Housing Corporation, and the Local Housing Supply Corporation are the main public bodies for constructing public housing, while the Housing Loan Corporation provides public funds. The construction of public housing comes under the administrative jurisdiction of the Ministry of Construction. Private enterprises wishing to build dwellings for their employees may obtain a certain percentage of the required funds from the Government. The central Government has its own rental housing facilities for government employees, owned and managed by the Ministry of Finance.

While there is a great need in Japan for the improvement of the housing situation, especially due to the heavy concentration of population in urban areas, houses are at present very expensive in Japan either for purchase or for rent. Standard houses often sell for five or more times the amount an average worker's household earns per year ($17,561 in 1978)

The high cost for housing in Japan is due mainly to soaring land prices and building costs as well as to the absolute shortage of space for housing due to the overpopulation in the larger cities. Land prices rose sharply especially during the period of the nation's high economic growth and the spiraling inflation after the oil crisis when land often became an object of speculation not only by individual investors but by businesses.

⇦ *(From Top) Large apartment buildings in a suburban district; a house in a farming village; traditional Japanese-style house in Tokyo.*

ENVIRONMENTAL PROTECTION

In Japan, about 118 million people live on 378 thousand square kilometers (146 thousand square miles) of land, an area about one and a half times the size of the United Kingdom. Moreover, total flat land including agricultural and residential land and rivers and roads covers only 28 per cent of the total land area, and population and bustling industrial activities have been increasingly concentrated in the larger cities over the two decades of fast economic growth. The result in part has been serious environmental deterioration, such as air and water pollution and the destruction of natural surroundings.

Rapid economic growth and the resultant expansion of the industrial structure, now the second largest in the free world, have been accompanied by a notable shift from labor-intensive light industries to resource-consuming heavy and chemical industries. The people's lifestyle has also changed with the advent of the so-called "mass consumption" society in Japan, as symbolized by the popularization of motor vehicles. These factors have contributed to increased environmental disruption in Japan in recent years.

Today, the Japanese people recognize the need to try to protect their endangered environment. Efforts to create a better environment by remedying some of the past oversights and controlling further pollution are underway.

For example, regulations controlling the emissions of automobile exhausts are now very strict. Emission controls on sulfur, nitrogen, and carbon oxides in factory waste gases have been strengthened, and the volume of sulfur oxides in the atmosphere in city areas has steadily decreased and the increase rate in photochemical smog-related illnesses has noticeably slowed. According to measurements at 15 stations in representative air-pollution-prone cities, the annual average amount of sulfur dioxide in

the air decreased steadily from a high of 0.06 ppm in fiscal 1967 to 0.03 ppm in fiscal 1973 and down to 0.016 ppm by fiscal 1981.

Fish are returning to once polluted rivers, such as Tokyo's Sumida River. Various animals and birds, once having become rare in their regular habitats, are returning again. The movement to increase the number of national parks is making progress, and tree planting in heavily industrialized areas is continuing.

Legislation

Although Japan has had laws regulating mining activities from the early years of its industrial history, it was in 1967 that the first basic anti-pollution legislation affecting a broad range of pollution-causing sources, i.e, the Basic Law for Environmental Pollution Control, was enacted. Subsequently, more specific and detailed laws were enacted. They include the 1968 Anti-Air Pollution Law, the 1968 Noise Control Law, the 1970 Water Pollution Prevention Law, the 1970 Waste Disposal and Public Cleaning Law, the 1970 Marine Pollution Prevention Law, the 1970 Agricultural Land Soil Polluton Prevention Law, the 1971 Offensive Odor Control Law, and the 1972 Nature Conservation Law. Once under way, the legal as well as administrative setup for environmental protection has made marked progress during the past several years.

The Pollution Dispute Settlement Law was enacted in 1970 to deal with complaints related to environmental pollution in order to protect the health of those physically affected by pollution hazards and to compensate for damages incurred, including loss of livelihood. The 1970 Law for the Punishment of Environmental Pollution Crimes Relating to Human Health stipulates penalties for the discharging of substances injurious to human health and causing danger to the people's welfare or public health through the operations of factories. Under this law, not only the direct perpetrators of such crimes but also the corporations and employers such perpetrators represent are penalized. Furthermore, a provision for "presumptive evidence" has been incorporated to facilitate proving the relationship of cause and effect.

The 1972 Nature Conservation Law and other related laws and regulations, including the 1918 Wildlife Protection and Hunting Law, the 1957 National Parks Law, and the 1962 Law concerning Preservation of Trees for Conservation of Scenic Beauty of Cities, provide for strict conservation of wilderness areas, places of outstanding scenic beauty, natural objects of academic or cultural value, habitats of rare animals and birds, and grounds for outdoor recreation, as well as for the development and maintenance of parks and green belts in and around city areas.

Furthermore, the Long-term Environmental Conservation Program, a ten-year plan with the target date of 1985, was announced in March 1977 by the Environment Agency. According to the program, private enterprises are required to invest approximately ¥20,000 billion in anti-pollution measures in order to maintain the environmental quality standards established by the Government.

Anti-pollution Measures

The Environment Agency was set up in 1971 as the central administrative body for protecting the natural environment and eliminating pollution. Local governments as well, have established new administrative agencies to deal with the prevention and elimination of pollution in their respective regions.

By 1971, the Government had drawn up environmental quality standards covering broad areas of air and water pollution and noise pollution hazards. In addition, emission, effluent, and noise control standards are being enforced. These regulate the output of noxious gases and effluents in exhausts from industrial plants, as well as of noise. In contrast to the quality standards, laws regulating these standards carry en-

forcement provisions to force compliance, with penalties for violations.

Various laws have also been enacted to control, with penalty clauses, other environmental pollutions, such as vibration, soil contamination, and offensive odors.

Individual and corporate persons who perpetrate pollution hazards now have a legal responsibility for their actions and must carry out all measures required by law to prevent and eliminate such hazards and to provide necessary compensation for damage incurred. Under this "polluter pays" principle, all industries are now being forced to develop effective and economically feasible technological innovations for pollution control.

In local areas where the nationwide laws are considered to be still inadequate, local bylaws and regulations are being enforced to supplement existing national laws and deal with local problems. Today, almost all regions have some form of local pollution guidelines, and this has been especially successful on the prefectural level, with all 47 prefectures having enacted bylaws for pollution prevention.

Many kinds of disputes between the suspected polluter and those affected concern questions involving the establishment of responsibility for such pollution hazard and the payment of indemnity. Unless settled privately between the parties concerned, such disputes go through either administrative channels for official arbitration or mediation or the legal procedures of lawsuits. There have been cases where criminal proceedings have been taken against those industries which failed to take responsibility for the consequences of their pollution-causing activities, and the number of cases actually prosecuted has recently increased as the result of mounting public awareness of the danger of pollution.

Complaints lodged with local governments concerning environmental disruption amounted to 64,690 cases in 1980. Among these complaints, those concerned with noise and vibration (24,094 cases) ranked first, followed by offensive odors (12,900 cases), and air pollution (9,282 cases). The number of complaints has decreased yearly since 1972, when the total amounted to 87,764 cases. The number of disputes concerning environmental pollution in 1981 was 126, including 102 cases pending from previous years. Out of the total, 53 cases were resolved within 1981.

Legislative and administrative measures providing relief for health hazards caused by pollution were strengthened in 1973 when the Pollution Health Damage Compensation Law was enacted. The purpose of this law is to pay victims of specific diseases in certain localities designated by the Government, compensation benefits and medical expenses as well as to provide medical and welfare services required to these patients or their families.

Payments under this health compensation scheme are made from a fund consisting of surcharges paid by enterprises and others responsible for air and water pollution either in general or in specific cases. The compensation plan works through the prefectural and municipal governments of the areas designated by the national Government.

The scheme started in September 1974, and as of March 1982, 41 localities had been designated as pollution-hazard areas, and 83,211 people from these localities had been diagnosed as patients entitled to compensation benefits under this plan.

Research and Development

Both government and private industry are developing new technological processes and instruments to ensure the effective implementation of environmental protection measures.

The expenditure for research and development on environmental disruption has increased yearly and amounted to ¥42.6 billion ($193.8 million) in fiscal 1981.

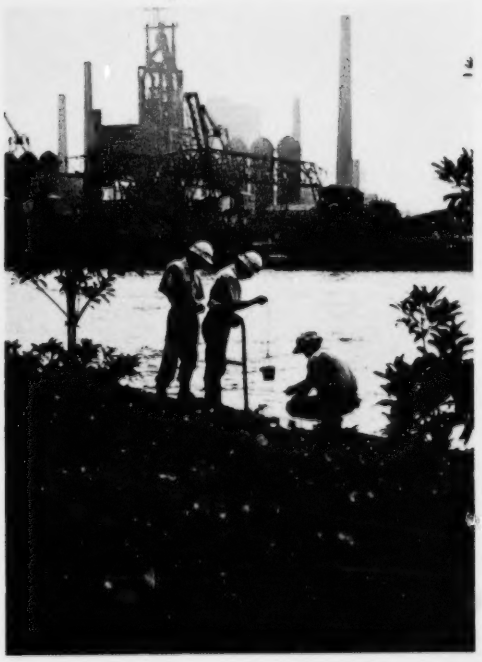
Budget allotments for national and local government activities concerned with environmental preservation have been con-

siderably expanded. Out of the national budget for 1981, 1.0 per cent, or ¥1,205.5 billion ($5.5 billion), was earmarked for environment-related programs.

Budget appropriations on the prefectural and municipal levels have also been significantly expanded. In fiscal 1980, the total expenditure for pollution-related activities on the part of local governments was ¥2,751.4 billion ($12 billion), representing a growth of 9 per cent over the previous year.

Anti-pollution investment by private industries increased rapidly after 1965, amounting in value to ¥947.1 billion in 1975, or as much as 17.1 per cent of the total amount of the year's equipment investment. The 1975 figure showed a more than five-fold increase over the 1970 amount of such investment. However, this level peaked in 1975 and from 1976 investment started decreasing. In 1978, it was ¥399.8 billion ($1.9 billion), 5.8 per cent of the total amount of the year's equipment investment. The amount decreased further by 12.6 per cent to ¥349.5 billion ($1.5 billion) in 1980. The decrease was partly due to the economy's stabilized growth, and to a tentative attainment of anti-pollution standards by 1975, such as in the case of sulfur dioxide.

(Top) Cycling road in a park in Tokyo.
(Below left) One of many national and prefectural "recreational forests" found throughout the country; (right) sampling and testing river water for pollutants near a factory. ⇨



CULTURAL LIFE

EDUCATION

During the long feudal period preceding the Meiji Restoration in 1868, various educational establishments developed to serve the needs of the different social classes. Provincial lords had set up special schools for the children of the warrior class, while rural communities operated schools for the wealthier members of the merchant and farming classes. Another type of private school was the *terakoya*, where reading, writing, and arithmetic were taught to the children of the common people, mostly in urban areas.

With the Meiji Restoration, particular importance was laid on education. A modern national education system was introduced in 1872, when the Government set up elementary and secondary schools throughout the country. In 1886, every child was required to attend elementary school for either three or four years. In 1900, compulsory education was made free of charge and in 1908, its duration extended to six years. Following World War II, this period was extended to the present nine years, covering elementary and lower secondary schools.

The basic structure and principles of the present educational system are laid out in two laws passed in 1947: the Fundamental Law of Education and the School Education Law.

A central concept in Japanese education today is to produce self-reliant citizens of a peaceful and democratic state and community with respect for human rights and a love for truth and peace.

Another basic principal enunciated in the Fundamental Law is equality in educational opportunity for all in keeping with their abilities. The Law prohibits discrimination based on race, creed, sex, social status, economic position, or family background.

The Law emphasizes the importance of political knowledge and of religious tolerance in the development of sound citizens, but it specifically prohibits any link between political parties or religious and education.

Emphasis is laid in the public school curricula on social studies. This is in line with the Fundamental Law of Education, which encourages social education and calls on state and local authorities to establish such institutions as libraries, museums, and civic halls.

The educational system is divided into five stages: kindergarten (one to three years), elementary school (six years), lower secondary school (three years), upper secondary school (three years), and university (normally four years). In addition, junior colleges, with courses of two years, are recognized, and many universities provide postgraduate courses for advanced studies.

Education is compulsory for nine years and is provided free for all children between the ages of six and fifteen at all elementary and lower secondary public schools.

Today, 99.98 per cent of the children between these ages are enrolled in schools.

In addition to the public educational facilities available, private schools are found at all stages of the system. These are playing a particularly important role in infant education before and including kindergartens and on advanced levels, both of which are

⇦ *An autumn setting in suburban Kyoto.*

beyond the scope of the compulsory system. As of May 1981, as many as 73.7 per cent and 76.6 per cent, respectively, of all pupils and students in kindergartens and institutions of higher education were enrolled in private institutions, while 28.3 per cent of all upper secondary school students were attending private schools.

The administration of education is decentralized. The role of the Ministry of Education is broadly that of a co-ordinator. Responsibility for school budgets, educational programs, school appointments, and the supervision of elementary and lower secondary schools lies in the hands of local boards of education. The members of the boards of education are selected by the administrative head of the local governing authority.

As regards the content of education, each school organizes its own curricula in accordance with the *Course of Study*, prepared and published by the Ministry of Education. Textbooks are selected by the local boards of education from among those authorized by the Ministry.

School Statistics

As of May 1981, the number of educational institutions, teachers, students, and pupils was as follows:

	Institutions	Full-time teachers	Enrollment
Kindergartens	15,059	100,231	2,292,811
Elementary schools	25,004	473,957	11,924,706
Lower secondary schools	10,810	258,479	5,299,281
Upper secondary schools	5,219	247,719	4,682,829
Special schools for handicapped children	877	35,182	94,069
Technical colleges	62	5,765	46,468
Junior colleges	523	40,897	372,406
Universities	451	174,429	1,822,117

Libraries, museums, and other institutions also play a considerable educational role. In March 1980, there were 1,320 public libraries with 72,318,000 books.

The aggregate number of books lent out by these libraries in fiscal 1979 was 130,400,000. There were also 577 museums, of which 160 art museums, 40 zoos, 30 aquariums, and 23 botanical gardens as of May 1981.

As of May 1981, a total of 7,179 foreign students were enrolled in Japanese universities. The majority of these students, or 5,578, were from Asia, including 776 from the Republic of Korea and 2,986 from Taiwan, with 633 from North America, 337 from Europe, 297 from Latin America, 130 from the Middle East, 83 from Oceania, and 117 from Africa.

Many young people from Asia and other countries come to Japan for technical training at scientific and technological institutes or at various industrial plants and factories.

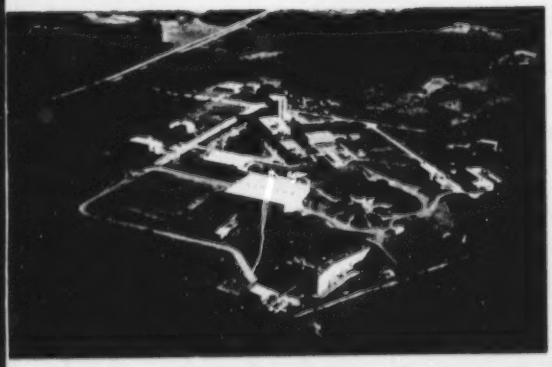
SCIENCE

Scientific research in Japan has made substantial progress over the past two and a half decades.

The leading role in basic scientific research in Japan is played by universities and their research institutes. Administrative management of basic research in natural science is the responsibility of the Ministry of Education, and that of research in applied science and technology is under the jurisdiction of the Science and Technology Agency of the Prime Minister's Office.

The Science Council, an advisory organization to the Minister of Education, submits reports and recommendations to the

(Clockwise from top left) Art class in a lower secondary school; children's library; an ultra-high voltage electron microscope; an experimental high-speed surface transport coach using magnetic levitation; national laboratory for high energy physics in Tsukuba. ⇨



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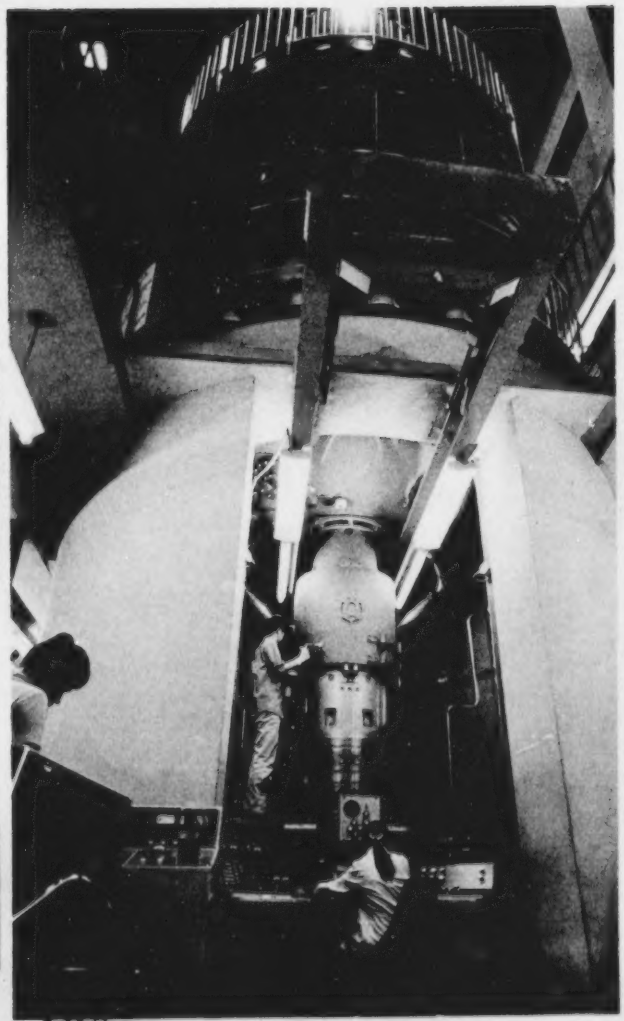

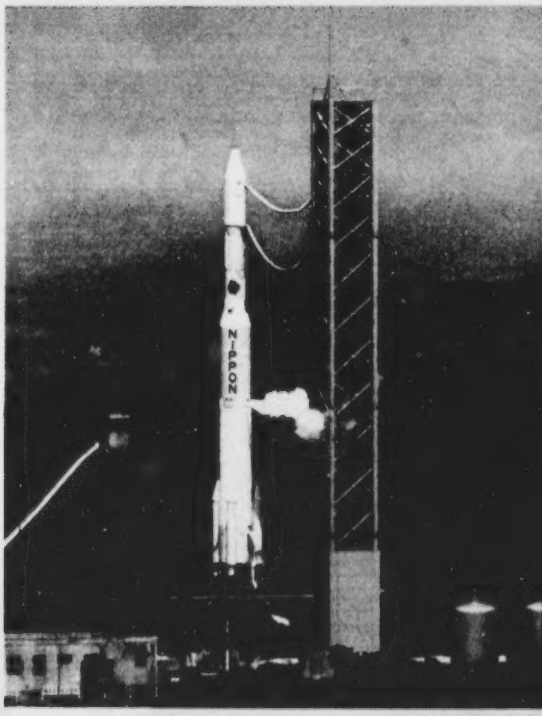
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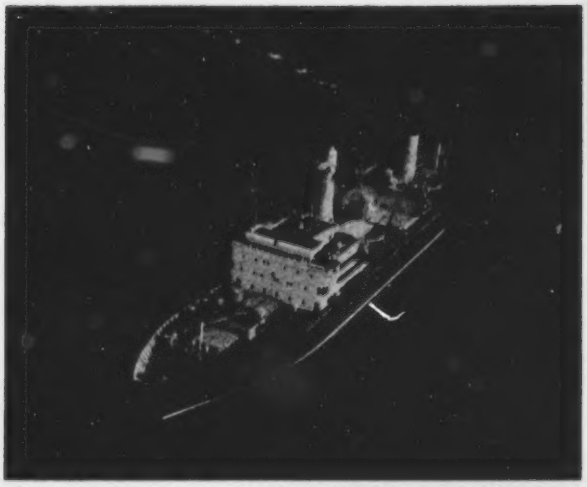
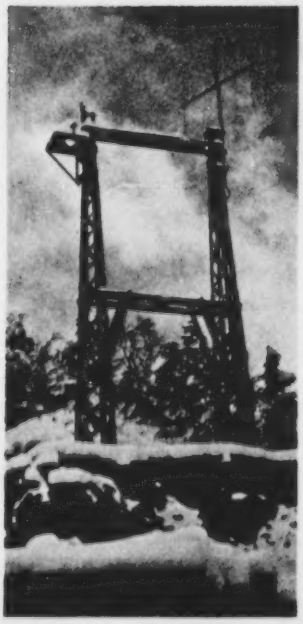
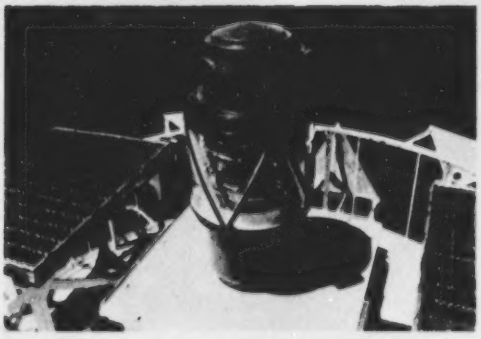
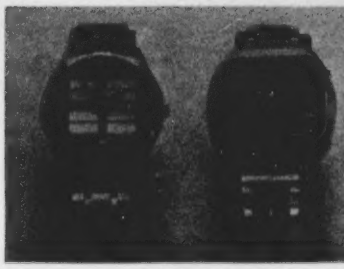
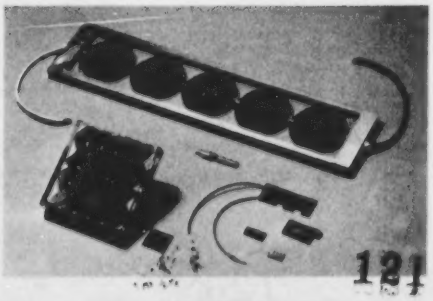










Minister on policy matters on science. In 1981, the Council had four committees on grants-in-aid for scientific research, science information, scientific terminology, and promotion of research in specific fields and three special committees on scientific research systems, space science, and international exchange of scientific information.

National universities in 1981 had 65 research institutes of their own in the field of natural science, with six research insititutes under the direct control of the Ministry of Education, which are for the joint use of several universities. One such example is the National Laboratory for High Energy Physics in Tsukuba New Town for Research and Education, north of Tokyo.

Altogether there were 972 scientific and technical research institutes in Japan as of April 1980, including 688 national, prefectural, and special statutory establishments and 239 private ones. Besides these independent institutes, large public organizations and private enterprises have their own research departments.

There were also some 305,000 professional researchers (university graduates fully engaged in research on specific subjects with two or more years of experience) in science and technology. This represents 26 researchers in natural science for every 10,000 persons in Japan. The ratio compares with 28 for the U.S., 16 for the Federal Republic of Germany, 13 for France and 51 for the U.S.S.R.

⇦ *(Upper left) Snow car and airplane for Japan's Antarctic survey program and the nuclear-powered experimental ship,* Mutsu.
(Upper right) Rocket launching tower for an applications satellite and global weather photo (lines added) from a stationary weather observation satellite over the western Pacific Ocean.
(Below photos) Expanding use of solar batteries: (clockwise from upper right) wristwatches, telemeters for measuring rainfall, solar battery modules, snowfall monitoring tower in the northern Japan Alps, unmanned lighthouse in the Malacca Straits.

At all levels of the educational system, scientific and technical education is an important part of the school curriculum. More than 30 per cent of all university students specialize in some branch of the natural sciences.

Japan's three outstanding leaders in the field of physics, Dr. Hideki Yukawa, Dr. Shinichiro Tomonaga, and Dr. Leo Esaki, were awarded Nobel Prizes in 1949, 1965, and 1973, respectively. In 1981, Dr. Kenichi Fukui was awarded the Nobel Prize in Chemistry.

Japan has been active in international cooperation in the field of scientific research through bilateral arrangements and multilateral organizations including the Association for Science Cooperation in Asia.

Nuclear Energy

The Japan Atomic Energy Commission was formed in 1956 to deliberate basic policy toward the research, development, and use of nuclear energy. With the wartime experience of Hiroshima and Nagasaki indelibly imprinted on the minds of the people, Japan's nuclear energy program is strictly devoted to the peaceful application of this new energy source.

Now, with the passage of more than two decades of research, Japan has entered an era of full-scale utilization of nuclear energy, that is, the peaceful use of nuclear energy is shifting from the research and development stage to that of being established as an industry.

In order to meet the growing concern over nuclear safety, the Nuclear Safety Commission was established in October 1978 to formulate policy on nuclear safety regulation.

Japan's nuclear energy development center is located at Tokai Mura, 113 kilometers (70 miles) northeast of Tokyo on the Pacific coastline.

Here are located two major facilities: the Japan Atomic Energy Research Institute (JAERI) which is responsible not only for research into practical uses of atomic energy, including thermonuclear fusion research,

but also for the training of engineers for industry, and the Power Reactor and Nuclear Fuel Development Corporation PNC) which is engaged in the development of nuclear materials and the research of advanced thermal rectors and fast breeder reactors in order to produce more efficient and economical power reactors.

The JAERI has six research reactors including a material test reactor, a power demonstration reactor, and a nuclear safety research reactor. Besides the PNC, which has two research reactors, five universities and one company are also equipped with atomic reactors for training and research purposes.

Japan's atomic scientists are pursuing the practical application of atomic energy in various fields. As of March 1981, the number of the facilities which used radioisotopes totaled 4,084. The Institute of Radiation Breeding of the National Institute of Agricultural Sciences is experimenting with the application of radiation for crop improvement and plant breeding, the Takasaki Radiation Chemistry Research Establishment of JAERI is studying the use of radiation chemistry in industry, and the National Institute of Radiological Sciences is concerned with the medical uses of radiation.

In international programs of atomic research, Japan is cooperating in training programs, dispatching engineers, and exchanging information and data. Japan is a member of the International Atomic Energy Agency and an associated state of the Nuclear Energy Agency of OECD. In August 1978, Japan also joined the Regional Cooperative Agreement for Research, Development and Training Related to Nuclear Science and Technology. Through these organizations, Japan has played an active role in exchanging scientific and technical information and specialists. In bilateral relations, there are the Japan-U.S., Japan-U.K., Japan-Canada, Japan-Australia, and Japan-France Atomic Energy Cooperation Agreements for collaboration on the research and development of atomic energy.

Space Research

Space research in Japan, which began in 1955, can be classified into two categories: scientific exploration of outer space and the practical application of artificial satellites to such fields as communications, meteorological measurements, navigation, and geodetic surveys. These two types of space activities are carried out both by Government agencies and by universities along the lines set forth by the Space Activities Commission.

In 1969, the Commission formulated the first Space Development Program, which has since been reviewed annually for modification.

The National Space Development Agency (NASDA) was established in 1969, taking the place of the former Nationl Space Development Center of the Science and Technology Agency. It is the central organ for the development of launching vehicles and applications satellites.

The Institute of Space and Astronautical Science (ISAS), under the direction of the Ministry of Education, plays the leading role in the scientific exploration of outer space. Exploration has been carried out by means of sounding rockets, ballons, and ground observation. Gradually, however, progress in sounding rocket techniques has made it possible to develop launch vehicles capable of launching satellites into orbit.

By February 1981, the Institute had successfully launched four test satellites and seven scientific satellites.

Japan's first man-made satellite was sent into orbit around the earth by the Institute on February 11, 1970. This made Japan the fourth country in the world to orbit an artificial satellite on its own, after the Soviet Union (1957), the United States (1958), and France (1965).

Twenty-two satellites have been successfully launched and have performed various observations and experiments.

Seven scientific satellites have been successfully launched to study the ionosphere, plasma waves, solar soft X-rays, electron density, X-ray stars, two dimensional im-

ages of solar hard X-ray flares, etc. In addition, five test satellites have been successfully launched.

Development is continuing toward the launching from FY 1982 to FY 1985 of four more scientific satellites for studying X-ray galaxies, the stratosphere and mesosphere, Halley's Comet, X-ray sources of the nucleus of the active Galaxy, etc.

Space Experiments with Particle Accelerators (SEPAC) will be carried out as a part of the first Spacelab program scheduled for FY 1983 to clarify the mechanism of auroral emission, the behavior of charged particles in plasma, etc.

Japan has successfully launched two ionosphere sounding satellites and three engineering test satellites. In addition, the Geostationary Meteorological Satellite, the Communications Satellite for Experimental Purposes and the Broadcasting Satellite for Experimental Purposes were successfully launched with U.S. launch vehicles.

The Geostationary Meteorological Satellite-2 was successfully launched in August 1981 with the N-II launch vehicle. Development is being continued to launch Engineering Test Satellite-III, Communications Satellite-2 (CS-2a, CS-2b), Broadcasting Satellite-2 (BS-2a, BS-2b) and Marine Observation Satellite-1 by FY 1985. In addition, development study of the Geodetic Satellite-1 is continuing.

The N series launch vehicle is a three stage rocket, with liquid-fuel first and second stages and a solid-fuel third stage, used to launch application satellites. The N-I launch vehicle, which has the capability to launch a geostationary satellite weighing about 130 kg, was successfully launched for the first time in 1975. The N-II launch vehicle, an upgraded version of the N-I, has the capability of launching a geostationary satellite weighing about 350 kg and was successfully launched for the first time in February 1981.

Equal progress has been made in developing instrumentation for space observations. The Tsukuba Space Center of NASDA, which is responsible for the testing of satellites and vehicles as well as for satellite tracking, control, and data collection, was opened in Ibaraki Prefecture, north of Tokyo, in 1973.

The rocket launching site for ISAS is the Kagoshima Space Center, a 510,000-square meter area on the southern tip of Kyushu, while NASDA has its Tanegashima Island Space Center off southern Kyushu, both with a wide variety of facilities, including satellite assembly shops.

Japan is devoted to multilateral cooperation with the United Nations and other international organizations, and bilateral cooperation with the U.S., European Space Agency, Canada, etc. as well as active cooperation with the member countries of the Economic and Social Commission for Asia and the Pacific (ESCAP).

Antarctic Observation

Japan has been participating in Antarctic observations since 1956, when an observation team landed on Ongul Island and established Showa Base. As of the end of 1981, 23 teams have been dispatched since that date, the latest having departed from Tokyo in November 1981 aboard the specially designed observation ship *Fuji*.

The *Fuji* is a 7,760 ton icebreaker, transport, and floating research laboratory. In addition to transporting 400 tons of food, fuel, and instruments for use at Showa Base, the ship is equipped to conduct different kinds of scientific observations in such fields as meteorology, cosmic rays, and geomagnetism.

Japan's Antarctic observation program is concentrating on two main subjects: biology and upper atmospheric physics. Meteorological observations are recorded automatically and continuously through the use of an electronic computer. Special sondes are being used to probe the circulation of air currents above the antarctic wastes. Test rockets for upper atmospheric observations have been launched successfully. A large-sized snowcar has been developed for observational trips into the hinterlands in the spring months. From 1968 through 1969, the ninth Japanese Antarctic Research Expedi-

tion party made history in a research trip from Showa Base to the South Pole and back with their snow vehicles.

With a view to securing smooth coordination for expedition projects among all the related research organizations in Japan, the Headquarters of the Japanese Antarctic Research Expedition was established in the Ministry of Education, and for planning and carrying out actual observation and research activities, the National Institute of Polar Research was founded in September 1973.

INFORMATION MEDIA

Japan has been described as a nation of readers. Newspapers and magazines have large circulations and serve as a vital channel for the dissemination of information throughout the country. An equally vital role is played by radio and television, which are as highly developed in Japan as anywhere in the world.

As of October 1981, there were 125 daily newspapers in Japan. The total daily circulation is about 47 million copies. This means that every household reads, on the average, 1.30 newspapers a day. The major newspapers print both morning and evening editions, which are delivered as a set to subscribers. If these editions are counted separately, the total daily circulation reaches 67.3 million copies. According to United Nations figures for 1977, the total circulation of daily newspapers in the U.S.S.R. was 102 million, in the United States 62 million, in the United Kingdom 23 million, in the Federal Republic of Germany 26 million, and in France 11 millon.

A unique characteristic of Japan's newspaper world is the existence of so-called "national papers" with circulations extending all over the country. Thes, account for about half of the total daily circulation. In addition, these national papers incorporate the features of both "quality papers" appealing to limited circles and the "tabloid" type with its mass-circulation approach. Japan's five national dailies and their daily average circulations are as follows (Novemver 1980).

(Unit: 1,000 copies)

	Morning edition	Evening edition
Yomiuri	8,475	4,809
Asahi	7,395	4,521
Mainichi	4,565	2,455
Sankei	1,960	1,105
Nihon Keizai	1,850	1,128

In addition to their morning and evening editions, most of these papers publish weekly, monthly, pictorial, or other types of magazines.

Aside from these national papers, there are many regional papers as well as sports papers which enjoy fairly large local circulations.

Japan also has regular English-language newspapers available in most major cities: The Japan Times, Asahi Evening News, Mainichi Daily News, and Daily Yomiuri.

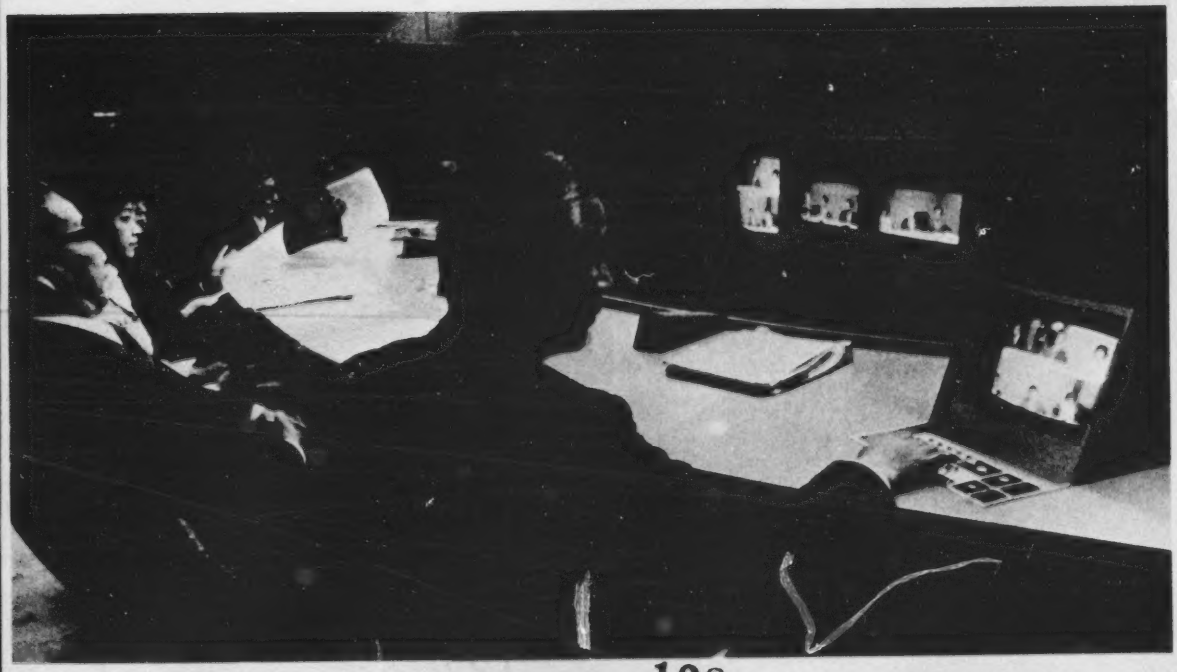
A total of 114 newspaper publishers, four news agencies, and 47 radio and television companies were members of the Japan Newspaper Publishers and Editors Association (Nihon Shinbun Kyokai) in June 1982.

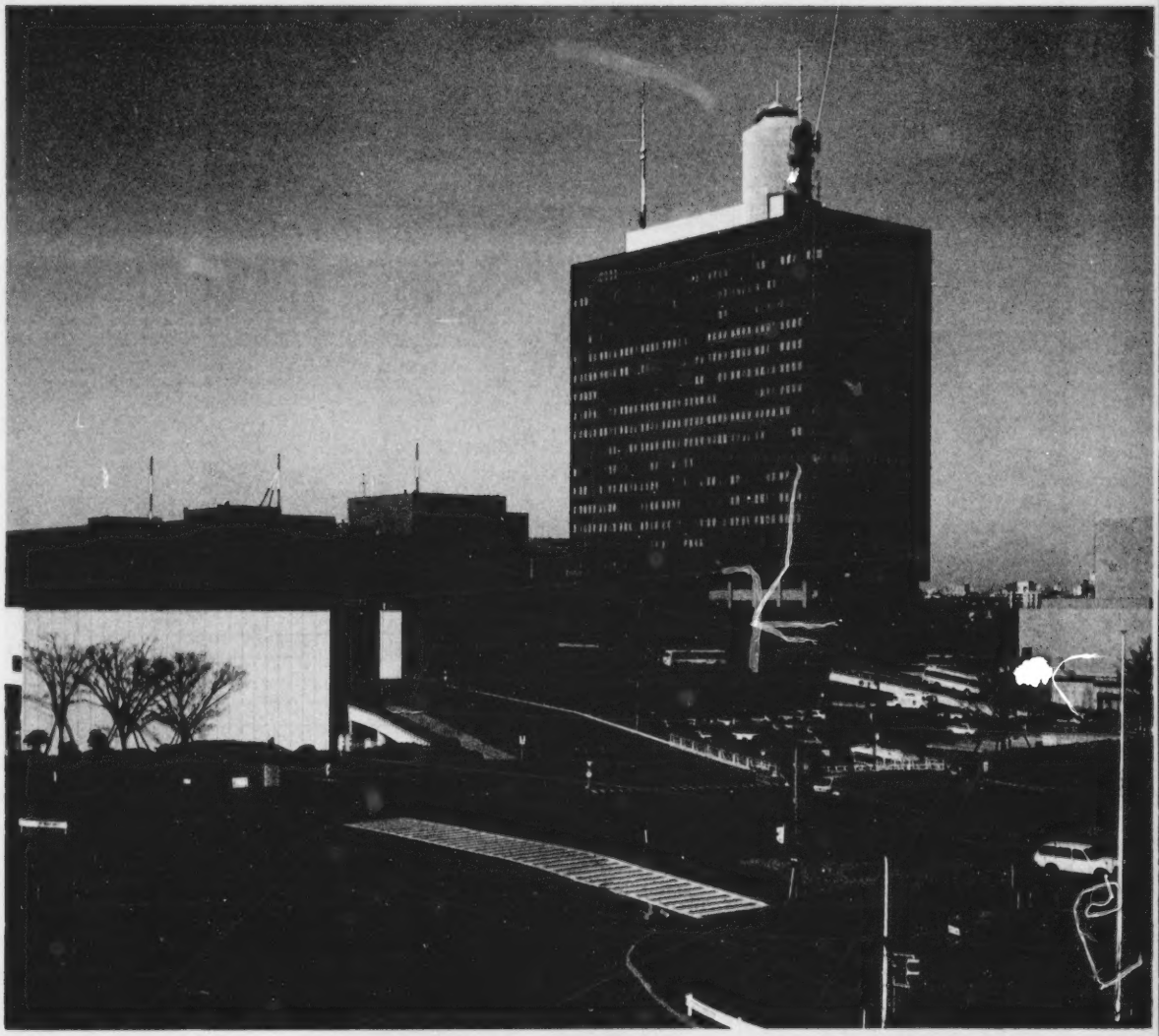
Japanese newspapers enjoy complete freedom of the press. None of the major national dailies is associated with any political party or group. Virtually all the Japanese newspapers pursue a politically independent course.

There are two major general news agencies, Kyodo News Service and Jiji Press.

(Top) Mobile libraries service the suburban communities and rural areas.
(Center left) Prototype of a facsimile-transmitting device for home use; (right) Japan's five national dailies and an English-language newspaper.
(Below) A video conference room for "face-to-face" communication between groups of people far apart.⇨

The Japan Times





Both maintain extensive news-gathering facilities around the world, Kyodo having correspondents and stringers in 38 world news centers plus contracts with 57 foreign news agencies, while Jiji maintains news bureaus in 25 principal cities abroad and has signed contracts with 16 agencies.

As of December 1981, 222 foreign news organizations, including television and radio networks, had resident correspondents in Japan.

Besides the newspaper companies, there were, as of March 1982, 4,154 publishers in Japan. In 1981 they published 29,362 titles and 3,338 different magazines.

Radio and Television

Radio and television in Japan today are as important as newspapers in their function as communications media. As of March 1981, there were 2,777,000 registered black-and-white television sets and 26,486,000 color television sets in Japanese homes.

Radio broadcasting began in Japan in 1925, when the Nippon Hoso Kyokai (NHK, or Japan Broadcasting Corporation) was established. NHK is a public corporation, directed by a board of governors and financed by license fees established by law and paid by television set owners. Radio license fees, once required, have been withdrawn.

As of March 1981, NHK operated 315 AM radio stations on two networks and 484 FM radio stations which also offered stereophonic broadcasts in many areas. The corporation also initiated television broadcasts for the first time in Japan in 1953 and today has 6,376 television stations. In overseas activities, NHK maintains Radio Japan, which is today beamed in 18 transmissions throughout the world in 21 languages for a total of 37 broadcasting hours a day. Radio Japan celebrated its 40th anniversary in 1975.

Commercial broadcasting began in 1951. As of March 1981, there were 17 commercial radio companies, 59 television companies, and 36 combined radio and television companies. They operate 4,678 television stations and 189 radio stations serving almost every part of the country. In 1981, the gross advertising revenues of the commercial broadcasting companies amounted to ¥964 billion ($4.38 billion). Revenue from commercial radio and television advertising represented 39.1 per cent of Japan's total advertising expenditure in 1981.

Progress in TV technology has been rapid, and new advances are being made in cooperation with the electronics industry. For example, the world's first sound multiplex TV broadcasting, namely, stereophonic and bilingual broadcasting, was started in 1978 by NHK and commercial stations in Tokyo and Osaka. Under this system, the viewer can receive musical, sports, and other programs in stereophonic sound provided he has a multiplex receiver in or attached to his TV set. Many news programs are now telecast over this system in Japanese and English and one or more foreign TV programs and films are offered daily in Japanese and the original language.

In a radio-TV-related development, newspaper companies and electric appliance manufacturers are experimenting with so-called "radio-wave newspapers" by which news can be transmitted directly to subscriber homes where a facsimile-receiving device automatically prints out the news or other information sent.

⇦*(Top) Headquarters of the Japan Broadcasting Corporation (NHK) in Tokyo.*
(Below) Studio production of a television drama.

LITERATURE

Contemporary Japanese literature, like much else in Japan, draws its strength from a rich variety of sources, from the classic influences of ancient China, from the diversity of Western thought, and from the enduring qualities of its own traditions.

A profound influence is exerted to this day by the two oldest surviving literary works in Japan. One of these is the *Kojiki* (Record of Ancient Matters), a prose work believed to have been written in A.D. 712. The other is the *Manyōshū*, a 20-volume anthology of poems compiled around 770. It contains some 4,500 poems by numerous men and women in every walk of life, both young and old–from emperors and empresses down to frontier soldiers and humble peasants, many anonymous. Covering a wide variety of subjects, many of these poems are known for their moving directness and bold simplicity.

The ninth century was a period of direct contact between Japan and China, and Chinese classics were the molding influence on the literature of the time. Contact was subsequently broken off and a period followed in which the influence of foreign works was assimilated and Japanese writers evolved a literature of their own.

The *Taketori Monogatari*, which was written around 811, is regarded as Japan's first novel. It was followed by other works, such as the *Genji Monogatari* (The Tale of Genji, c.1010), which is a 54-volume novel describing the love and anguish of noblemen and their ladies. It gives the reader a delightful glimpse of the life of Japan's aristocratic society in the 10th and 11th centuries, as well as of the elegant culture of the Heian Period, especially its aestheticism tinged with gentle melancholy. This first great novel in history was written by one of the Heian court ladies, most of whom were writers and poets of some distinction.

The daily life of the nobility at the turn of the 11th century is also vividly described in the *Makura no Sōshi* (The Pillow Book), a brilliant collection of essays in a style resembling prose-poems, by another talented court lady, but her descriptive observations are more realistic and show greater humor. The Makura no Soshi is marked by a sharpness of wit hardly rivaled in later Japanese literature.

During this period, *waka* or *tanka* –31-syllable poems in 5-7-5-7-7 form–become popular among the court ladies, nobles, and priests. In 905, the *Kokinshū* (Collection of Ancient and Modern Poetry) was compiled as the first anthology of poems collected under Imperial order.

Tanka became the classic Japanese verse form, which is still favored by many poets today. The shortness of the tanka form obliged poets to resort to suggestion as a means of expanding the content of their lines, a literary device which has been characteristic of Japanese poetry ever since.

The rise of local warrior aristocrats as the ruling class led to a period of about 150 years from the end of the 12th century when tales of war became popular. This century-and-a-half period produced a number of major historical romances in which the valiant *samurai* warrior replaces the effeminate courtier as hero. Two of the outstanding works are the *Heike Monogatari* (The Tale of Heike), around 1223, and the *Taiheiki* (Record of the Great Peace), appearing in the mid-1300s.

The decline of the power of the Emperor and his court and the destruction left in the wake of the bitter warfare lent a tragic tone to all writings, with stress on the vicissitudes of man's fate.

The outstanding verse collection of medieval Japan is the *Shin Kokinshū* (New Collection of Ancient and Modern Poetry), an Imperial anthology noted for its symbolic expression of delicate emotions and moods.

The two-volume collection of essays, *Tsurezuregusa* (Eassys in Idleness)(c.1335), written by a Buddhist monk living in seclusion, is a work of a contemplative nature and is pensive in tone. But the lyrical essays teach the reader in a subtle way the joy of

this temporal life as well as the Buddhist view of the impermanence of all things. Tsurezuregusa has had great influence on later Japanese writing and on the aesthetic and behavioral ideals of the Japanese people in general.

One finds a nostalgic note in the *noh* plays of the 14th and 15th centuries, where the world evoked is often that of the dead heroes of a few centuries earlier. These plays are remarkable not only for their dramatic power of refined symbolism but for their magnificent narrative poetry.

The 16th century was a period of warfare among rival feudal lords and hardly any literature was produced, but a great literary revival began in the latter part of the 17th century, or the early years of the Tokugawa Period of peace and a new plebeian culture. The novels by Saikaku Ihara (1642-93), known for vivid realism and an incisive style, and the plays of Monzaemon Chikamatsu (1653-1724) with their dramatic composition were written for a wider audience which included the newly risen merchant class and were of very high literary merit.

In these works, merchants, shop assistants, and common townspeople take the place of generals as heroes, and their tragic end sometimes comes in suicide with a courtesan, rather than in some noble combat. Most of Chikamatsu's plays were written for the puppet theater, but they were later adapted for the *kabuki* stage. Some of his works are still performed today.

About this time, *haiku*, a three–line poem of 5, 7, and 5 syllables, emerged as a new form of verse, its greatest exponent being Basho Matsuo (1644-94). He developed a simplicity of style and profound subtlety of content which continue to be the ideal form sought by modern-day haiku poets.

These important developments in the novel, drama, and poetry continued into the 18th and early 19th centuries, while the country was virtually sealed off from the rest of the world.

Western literature swept into Japan during the 19th century like a wave, sometimes invigorating and sometimes confusing. A hectic period of literary experimentation and development followed.

Japanese literature was enriched by the different currents of Western thought, such as liberalism, idealism, and romanticism. Japanese writers turned their hand to Western-style novels, and the different trends and currents of thought derived from the West flourished side by side.

Outstanding novelists like Ogai Mori and Soseki Natsume produced their works at the turn of the century. These are still widely read today.

Western literary works are translated into Japanese in great number, and the great names of the West, from Shakespeare, Goethe, and Tolstoy to contemporary masters of literature, are perhaps as familiar in Japan as in their own countries.

Despite the impact of Western literature, traditional Japanese forms still flourish. Tanka and haiku, for instance, are penned today by a huge number of poets, both professional and amateur, with all the skill and enthusiasm of the court aristocrats of the past. The newspapers carry regular tanka and haiku columns for these amateur poets.

Since the war, a growing number of Japanese works have been introduced abroad. English and other translations of comtemporary works that have been widely read include *Homecoming* by Jiro Osaragi, *The Temple of the Golden Pavilion* and other novels by Yukio Mishima, and *Some Prefer Nettles* by Junichiro Tanizaki. Arthur Waley's *The Tale of Genji* and other translations of Japanese classics are also widely read.

In 1968, Yasunari Kawabata (1899-1972) was awarded the Nobel Prize in Literature. He was the first Japanese ever to receive the coveted prize in the field of literature.

Kawabata is widely known abroad through his works translated into foreign languages, such as *Yukiguni* (Snow Country), *Senbazuru* (A Thousand Cranes), and *Koto* (Kyoto). His style of writing is marked by the pursuit of the beauty of Japanese lyricism with a shapened sensibility.

Japanese literature today is the product of

modern life as led, with regional variations, in other countries of the world. It no longer represents an entirely independent tradition as was true before the introduction of Western literary influences, but now more or less concerns itself with universal problems. As a part of the broader stream of world literature, it is helping to mold the literary tastes of readers throughout the world.

ART

Japanese art is as diverse today as its traditions are long, with a past rich in achievement and a present alive with enthusiastic creative endeavor.

The oldest surviving objects of Japanese art are earthen images dating from the Stone Age and crude stone figures of a somewhat later period. A yet later development was mortuary clay images called *haniwa*, which have been excavated from ancient mausoleums. These show some technical advance and are highly prized today as examples of primitive art.

The introduction of Buddhism in A. D. 538 led to a period of sudden artistic flowering that reached its height in the Asuka Period (538-645), when the arts were encouraged under Imperial patronage. Many Buddhist temples were built, including the celebrated Horyuji Temple near Nara, which is believed to be the oldest wooden building in the world.

The Buddhist influence is particularly evident in figurative sculpture, which flourished in this period. The emphasis was on solemnity and sublimity, and features were idealized.

The Hakuho Period (645-710), which followed the Asuka Period, was a time of strong Chinese and Indian influence. The flatness of form and stiffness of expression in the sculpture of the Asuka Period were replaced by grace and vigor.

The Tempyo Period (710-784) was the golden age of Buddhism and Buddhist sculpture in Japan. Some of the great works of this period may be seen in and around Nara today. They reflect a great realism, which is combined with a rare serenity.

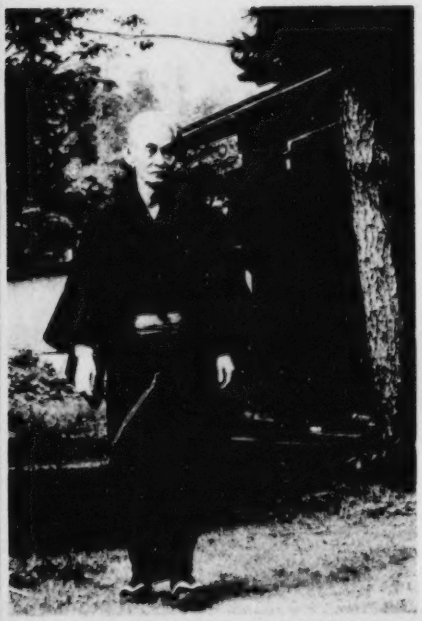
An idealized style of expression returned in the following Jogan Period (784-899), when the mystical teachings of the esoteric Shingon Buddhist sect influenced the sculpture of the time. The statues of this period are massive in from and mystic in expression.

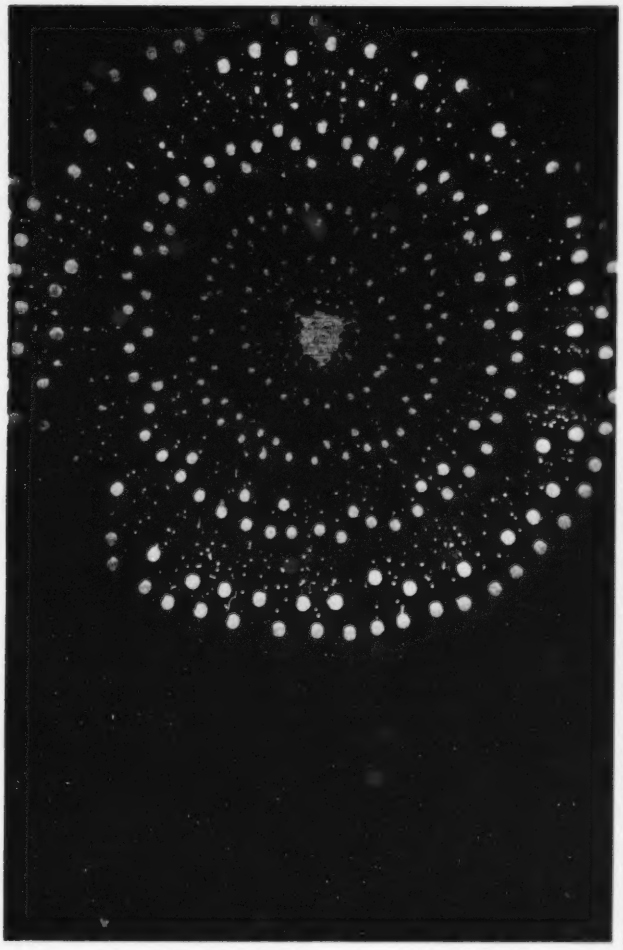
The Jogan Period marked the first 100 years of the Heian Period which continued until 1192. The Fujiwara family held sway, and the characteristics of the sculpture of this period are elegance and beauty, sometimes at the expense of strength.

Contact with China had been broken and the influences previously introduced from abroad were now assimilated to evolve a new type of Japanese art. Delicacy and exquisiteness of form mark the new artistic taste that evolved at that time. These characteristics are also seen in the unique architecture of the period. The most beautiful example of the harmony of tone of Heian architecture is the Ho-o-do (Phoenix-Hall) of the Byodoin Temple near Kyoto.

Painting assumed an important position during this period, almost for the first time. It was in this era that the type of painting known as *yamatoe* and the art of *emakimono* (illustrated scrolls) developed.

(Top) Section from the Tale of Genji *scroll of the 12th century.*
(Center) Famous novelists (from left): Yasunari Kawabata, Junichiro Tanizaki, Jiro Osaragi, Yukio Mishima.
(Below) A typical scene at one of Tokyo's hundreds of bookstores.⇨





The austerity of the warrior-class regime and of Zen Buddhism was reflected in the subsequent Kamakura Period (1192-1333), when sculpture became extremely realistic in style and vigorous in expression. The Zen influence was reflected in the purity and simplicity of the architecture of the period. Traces of the influence of the tradition established in the Kamakura Period can be found in Japanese architecture even today. Illustrated scrolls and portrait painting were also in vogue during this period.

Sumie, the delicate style of brush painting with black ink, was developed in the Muromachi Period (1333-1573). It originated with the Buddhists of the Zen sect who were familiar with the art of the Chinese Sung Dynasty.

The Azuchi-Momoyama Period (1573-1603), which followed, was a time of transition. It was also period of great artistic sophistication. Artists expressed themselves in bright colors and elaborate designs. Gorgeous folding screens were introduced. Castles and temples were decorated with elaborate wood carvings. Masks of great artistic refinement began to be worn in the *noh* dramas.

The most famous single artistic form in the Tokugawa Period (1603-1867) is perhaps the *ukiyoe* genre print, which won immense popularity among the general public. The influence of ukiyoe on European art in the latter half of the 19th century is well known. Sculpture declined during the Tokugawa Period, but considerable advances were made in handicrafts.

A special mention must be made in any review of Japanese fine arts of the Katsura Detached Palace in Kyoto. It was built in the early Tokugawa Period and is famous for its superb harmony and rare simplicity. The garden is considered one of the finest examples of Japanese landscape gardening.

The second half of the 19th century was a period when Western influences made themselves felt in Japanese art. Today, Western forms and traditional Japanese styles exist side by side and sometimes mingle with each other in a new process of mutual assimilation and reinvigoration.

The Japanese show a deep interest in artistic developments, both as spectators and as practitioners. Painting and drawing are unusually popular spare-time pursuits. A large number of art exhibitions are held at all times of the year in the main cities and draw large crowds. Japan's oldest and most impressive annual art show is the comprehensive Nitten Art Exhibition; to be selected for display there is one of the nation's highest art honors.

Since the war there has been a brisk international artistic exchange. Many Japanese paintings and other works of art have been shown abroad and numerous exhibitions of foreign works are held in Japan.

Besides the Japan International Art Exhibition, which is also called "Tokyo Biennale," the International Biennial Exhibition of Prints, held in Tokyo and Kyoto, is well known throughout the world.

The Japanese love of art and nature is reflected in many aspects of their daily lives, in their architecture and in the popularity of flower arrangement and the tea ceremony.

MUSIC

The orchestral works of the West are as much a part of Japan's musical life as the traditional music played on the *samisen*,

⇦ *(Top)* Yoshino Mountain Range in Spring, *a Japanese-style painting by Dogyu Okumura.*
(Below left) A Flower of Fire, *a woodblock print by Fumiaki Fukita; (right) Japanese musical instruments in concert performance, and the NHK Symphony Orchestra.*

shakuhachi or *koto*. Pop music is today as popular as the traditional ballads of Japan.

One of the oldest forms of Japanese music, still preserved at the Imperial Court and at some Shinto shrines, is *gagaku* (Court music and dance). It derives from a style of music introduced to Japan in the 8th century from China of the T'ang Dynasty, which had earlier absorbed the ancient music of Persia, India, and Korea. It is highly stylized and evokes the elaborate rituals of a bygone age. Gogaku is publicly performed in Japan from time to time, and the Court musicians have since 1959 given performances in the United States and Europe.

Instrumental music can be represented by three typical instruments: the samisen, a balalaika-type instrument of three strings; the shakuhachi, a clarinet-like instrument made of several joints of a bamboo stem; and the koto, a low, long instrument with 13 silk strings.

The samisen is played as accompaniment for *kabuki* and *bunraku* and for *buyō* (classical dancing). The shakuhachi, formerly restricted to priests of a Zen sect of Buddhism prior to the Meiji Restoration, has developed a rather large following of foreign musicians who find fascination in the grandeur of its sound and the profundity of its timbre. The koto, perhaps the most popular and widely played Japanese instrument, is primarily used in solo performances, as accompaniment for buyo, or in massed recitals.

Western music began to develop along with Japanese music in the latter half of the 19th century. It has been taught in schools since the 1870s.

Every conceivable form of Western music is composed, performed, and enjoyed in Japan today. Tokyo has seven major symphony orchestras, and there are other local orchestras including those in the Kansai district. There are a total of 20 music schools in Japan, turning out a stream of new performers and vocalists, as well as numerous dancing academies where ballet is taught. Concerts, recitals, and performances of opera and ballet draw large audiences with programs of works by composers ranging from Bach to the most modern experimentalists. Musical talent is encouraged and sought out by national music contests that are held several times a year.

Every year there is a steady flow of foreign musicians and organizations coming to perform in Japan. The list of foreign orchestras, soloists, conductors, ballet, and opera troupes who have visited Japan in recent years reads like a directory of the world's leading artistic talent.

Each spring, many of the world's most famous musicians and ensembles travel to Japan to take part in the Osaka International Festival. The Festival, inaugurated in 1958, aims to promote international cultural exchange and to encourage the training and development of individual artistic talent.

Japanese musicians themselves are performing overseas frequently and are achieving a growing international reputation. Japanese orchestras, including the NHK (Japan Broadcasting Corporation) Symphony Orchestra, the Yomiuri Nippon Philharmonic, and the Japan Philharmonic, have made a number of successful tours abroad. Individual conductors such as Seiji Ozawa, former musical director of the Toronto Symphony and of the San Francisco Symphony, and more recently music director of the Boston Symphony are also drawing attention abroad.

The preservation as well as development of Japanese music in its classical forms is not being neglected. One group dedicated to cultivating new Japanese music within its classical tradition is the Ensemble Nipponia, formed in 1964 and consisting of distinguished soloists and composers. While it is a chamber orchestra complete with Japanese wind, string and percussion instruments, it has a broad repertoire using all or some of the instruments or at times a single instrument in solo performance in forms approaching the Western style of composition.

THEATER

The theatrical arts flourish in Japan with a vigor that has carried their fame across the world. They are perhaps unique in their variety, ranging from the formal stateliness of the *noh* drama to the down-to-earth lustiness of popular vaudeville, from puppet drama whose traditions have been handed down through the centuries to elaborate wide-screen productions of the motion picture industry.

The three major forms of classical Japanese drama are noh, *bunraku* (puppet dramas), and *kabuki*. The oldest of these is noh, which traces its origins back to the 13th century, when various rituals and religious dances of the preceding eras were integrated and developed. Noh reached its present form in the early 15th century.

It is a highly stylized dramatic form and was originally performed exclusively for the upper classes. The classic traditions are kept alive today by performers, many of whom come from a hereditary line of noh artists. Noh now has a relatively limited following, but its profound dignity, eloquent symbolism and classic grace will always command the enthusiastic admiration of its devotees.

A growing number of foreigners are joining the ranks of admirers of the noh, dance and drama. Noh was performed at the International Drama Festival in Venice in 1954. It has also been presented in Europe, the United States, Mexico, Brazil and India.

The bunraku puppet drama dates back to the 16th century and developed to its present form in the 18th century. It is performed regularly at the Asahi-za theater in Osaka and the National Theater in Tokyo. The puppets are elaborate, half life-size dolls whose movements are controlled by up to three puppeteers. They perform their dramas to the accompaniment of samisen music and narration and create a powerful illusion of human emotion and feeling. It is a unique and highly developed artistic form. Interest abroad in bunraku has been developing steadily and the first bunraku troupe to perform outside Japan toured the United States in 1966. It has since been presented three times in Europe, once in Australia, and in China, and once again in the United States.

Kabuki, Japan's most famous dramatic form, derives from both noh and bunraku, as well as incorporating other theatrical arts from an earlier age. It developed into its present form in the late 17th century. In its earliest days, it was performed by a troupe of women and later by young males, but since it crystallized into its present form, it has been performed exclusively by men.

Kabuki faithfully preserves the rich traditions of the distinguished past. Many of its most famous plays have delighted audiences for more than two centuries with little change. The kabuki repertoire, however, also contains a large number of new plays written by contemporary authors. In recent years, some moves have also been made to modernize kabuki, and a number of productions have been staged in which some modifications have been made in the style of presentation.

This dramatic art also enjoys an international reputation and since 1955 sixteen grand tours have been made abroad, eight times to North America, five times to Europe, twice to China, and once each to the U.S.S.R. and Australia.

In addition to its rich classical dramatic heritage, the Japanese theater also offers modern drama in the Western style. Serving as a bridge between the two is a group called *shimpa*, which was founded toward the end of the 19th century. Shimpa has its roots in the kabuki traditional—originally, for instance, it was performed only by male actors—but it is now a distinct form of its own with a natural style of acting. The action is usually set among the common people, and the cast includes actresses as well as actors.

Drama in the Western style is presented by a number of theatrical troupes. These first appeared about 70 years ago and today command a considerable following, especial-

ly among younger people. Their repertoire is extremely wide, ranging from the classics of such masters as Shakespeare, Molière, Ibsen, and Chekhov to modern plays by contemporary playwrights, both Japanese and foreign.

The first Japanese motion picture was made about 60 years ago and films were once the most popular dramatic form. However, in contrast to the rising popularity of television programs, movies now draw fewer people. The number of movie theaters declined from 7,460 in 1960 to 2,364 in 1980. Attendance also declined from 1,014 million in 1960 to 164 million in 1980.

Japan's film studios are among the most productive in the world, turning out 332 feature films in 1981, most of which were color and widescreen productions. Short subject production is also at a high level, amounting to about 1,500 films in 1981. Eighty per cent of them are industrial movies including documentaries, and scientific and cultural movies used for school or social education purposes.

Japanese films have received numerous awards for technical and artistic excellence in various international film festivals. *Rashōmon* was the first Japanese production to be awarded a Grand Prix at the 1951 Venice Film Festival. In 1980, *Kagemusha* was awarded a Grand Prix at the Cannes Film Festival.

In 1981, Japan exported about 200 titles. In the same year, 223 foreign films, including 139 American, 18 French, 14 British, 10 U.S.S.R., and 8 Italian, were released in Japan.

RELIGION

Freedom of religion is guaranteed to all under the Constitution of 1946, which states:

"No religious organization shall receive any privileges from the State, nor exercise any political authority. No person shall be compelled to take part in any religious act, celebration, rite or practice. The State and its organs shall refrain from religious education or any other religious activity."

Buddhism is the major religion in Japan and had a following of 83,504,000 as of the end of 1979. Christianity is also active, and there were about 883,000 Christians in Japan in 1979. Among the followers of other religions, Muslims in Japan number some 155,000 including temporary residents of foreign nationalities.

Shinto is Japan's indigenous cult originating as naturism and animism among the primitive Japanese who found divinity in all striking phenomena of nature as well as in the spirits of the dead. Shinto, or the "way of *kami* (deities)," soon became a community religion with local shrines for household and local guardian gods. Heroes and outstanding leaders of a community were deified for generations, and the spirits of family ancestors worshipped. The myth of the Imperial Family's divine origin became one of the basic tenets of the Shinto religion, and early in the 19th century a patriotic Shinto movement began to gain influence. After the Meiji Restoration in 1868 and especially during World War II, it was regarded as a State religion and encouraged by the authorities. Under the Consititution, Shinto no longer receives any special official encouragement or privileges, although it still plays important ceremonial and symbolic roles in many aspects of Japanese life.

Shinto exists side by side and sometimes overlaps in the popular mind with Buddhism. Many Japanese today go through Shinto rites when they marry, and Buddhist funeral rites when they die.

(From top) A Noh stage with its passageway to the left; climatic scene in a Kabuki drama; a scene from modern drama. ⇨

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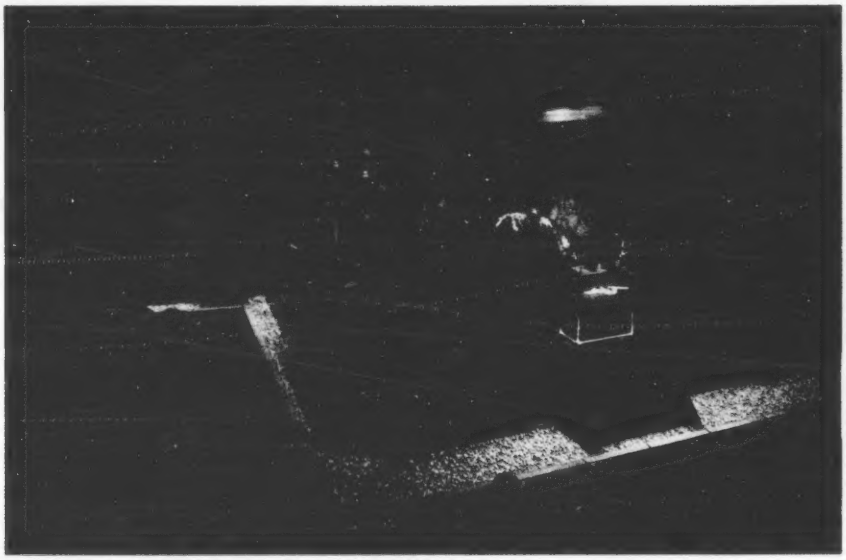
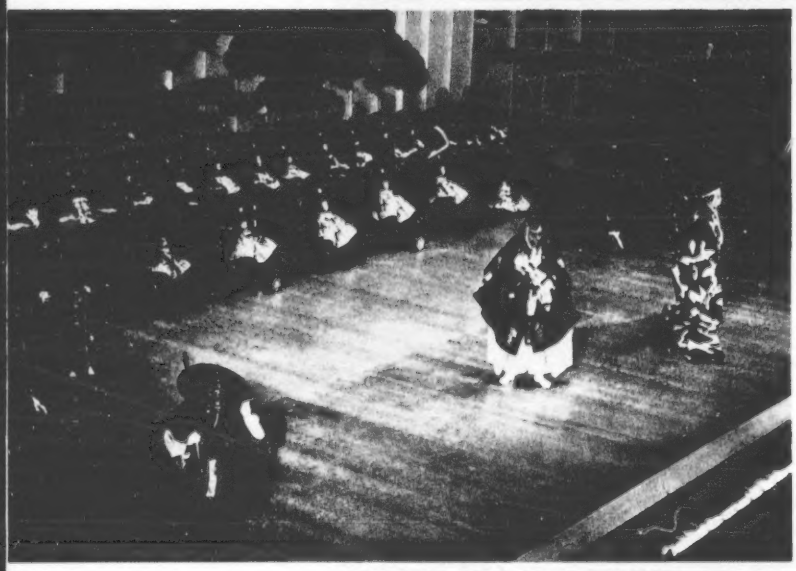
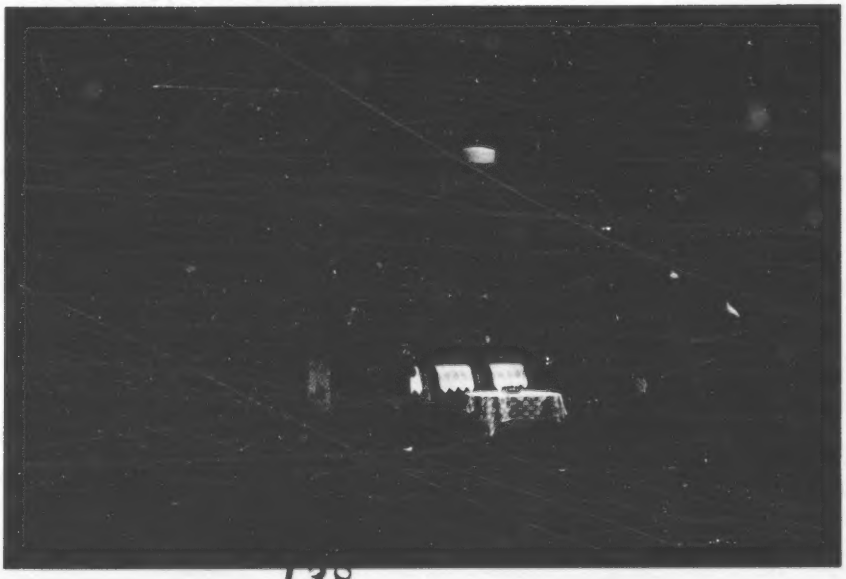
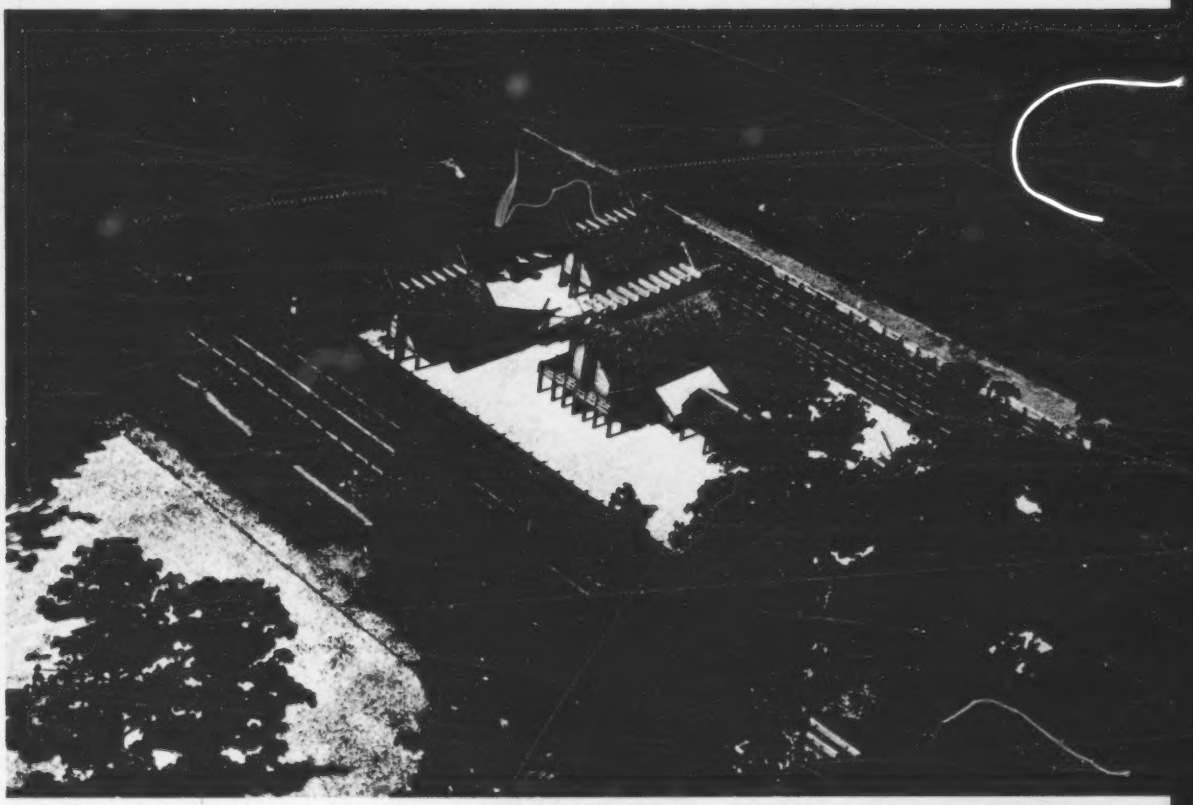








Buddhism was introduced to Japan from India through China and Korea around the middle of the 6th century. After gaining Imperial patronage, Buddhism was propagated by the authorities throughout the country. In the early 9th century, Japanese Buddhism entered a new age, catering primarily to the court aristocrats and contributing to the cultural growth of the country in general. The Kamakura Period (1192-1333) was an age of great political unrest and social confusion for the people. This gave rise to many new sects of Buddhism which introduced its hope of salvation more widely to the warrior as well as to the peasant and other common people. Throughout these periods, Buddhism not only flourished as a religion but did much to enrich the country's arts and learning.

During the Tokugawa Period (1603-1867), an age of growing secularization of society, the spiritual vitality of Buddhism was largely lost, along with the decline of the social and political power of Buddhist monasteries and temples and of the religion's cultural influence in general, amidst the peace and comparative material security gained under the Shogunate's strong governmental control.

Belonging to the Mahayana (Great Vehicle) Buddhism of East Asia, Japanese Buddhism generally preaches salvation in Paradise for everyone instead of aiming at the perfection of one's self alone and exists in a form quite different from that found in much of Southeast Asia. All the one hundred and more Buddhist sects in Japan today belong to or trace their origins back to the seven major branches of Buddhism that were brought into or developed in Japan in the earlier centuries.

Immediately after the end of World War II, "new religion" movements gained momentum. Some of the new religious organizations are based on Shinto and others are related to certain sects of Buddhism. Still others are of mixed religious orientation. Many of them undertake various social and cultural activities within their respective, closely-knit religious communities. Some also have come to engage in substantial political activities.

Christianity was brought to Japan in 1549 by the Jesuit missionary, St. Francis Xavier. It spread rapidly in the second half of the century, an age of internal strife and commotion and the new religion was welcomed by those who needed a new spiritual symbol as well as by those who hoped to obtain trade benefits or new Western technology, especially advanced firearms. Upon the unification of the nation toward the end of the 16th century, however, those who secured hegemony over the nation suppressed all potential for further change and banned Christianity as subversive to the established order. It remained banned for about 250 years until the middle of the 19th century, when Japan re-opened its doors to the rest of the world.

Protestants slightly outnumber Catholics among the Christians in Japan today. In 1959 Protestants celebrated the centenary of their arrival in Japan.

Confucianism has been regarded in Japan as a code of moral precepts rather than a religion. It was introduced into Japan at the beginning of the 6th century and has a great influence on Japanese thought and behavior. Its influence has somewhat declined since the war.

SPORTS

Almost every type of sport, both traditional and modern, has a huge following in

(From top clockwise) Inner sanctuary of Ise Shrine; Hōryūji Temple in Nara, founded in 607; the Daibutsu *(Great Buddha), a bronze figure of Amitabha in a meditating posture at Kamakura.*

Japan today. Sports papers and magazines are avidly read. Crowds pack the stadiums for all major athletic events, while millions more follow sports on television.

In the field of traditional sports, *sumo* (Japanese wrestling), *judo*, *kendo* (Japanese fencing), and *kyudo* (Japanese archery) are specially popular.

Radio and television have greatly revived the popularity of sumo. The beginnings of the traditional style of sumo wrestling are lost in the mists of antiquity, but in legend it goes back more than 2,000 years. It is a highly formalized but dramatic sport, closely followed today by almost every Japanese. Six regular sumo tournaments, each lasting 15 days, are held every year in Tokyo and other big cities. Professional sumo wrestlers spend the rest of the year touring the provinces.

Judo, developed from the old art known as *jujutsu*, is today a popular sport not only in Japan but in many other countiries. It was selected as one of the events for the 18th Olympic Games held in Tokyo and the 1972 Munich and 1976 Montreal Olympics. The first international judo championships were held in Tokyo in 1956. International championships are now held at regular intervals in different areas of the world. At home, the annual All-Japan Judo Tournament attracts keen interest all over the country.

Kendo waned in popularity after the war but is now enjoying a revival.

In addition to traditional sports, the Japanese engage in almost every form of athletics, from track and field events to tennis, badminton, bowling, baseball, soccer, rugby, swimming, rowing and equestrianism.

Baseball is one of the most popular sports in Japan today. It has been described as the national sport and is played both as an amateur and as a professional game, but whether the competing teams are school children playing on a sand lot or rival professional league leaders, any game can be sure of attracting a large crowd of eager spectators.

Golf is also establishing itself as a popular sport in Japan. There are 1365 courses in Japan today and about 10 million golfers.

Skiing and skating are the two most popular winter sports in Japan, stimulated by the ideal winter climate and the many suitable mountain sites and resorts. It is estimated that Japan has more than ten million skiers and skaters each, with the number increasing steadily each year.

The combination of ideal weather and numerous mountain ranges has also aroused an enthusiasm for mountain climbing. Aside from hundreds of groups climbing the Japan Alps at home, Japanese teams are active in scaling peaks abroad. In May 1970, a Japanese team became the sixth in the world to reach the summit of Mt. Everest. In May 1975, a member of an all-women Japanese team became the first woman in history to scale the world's highest peak.

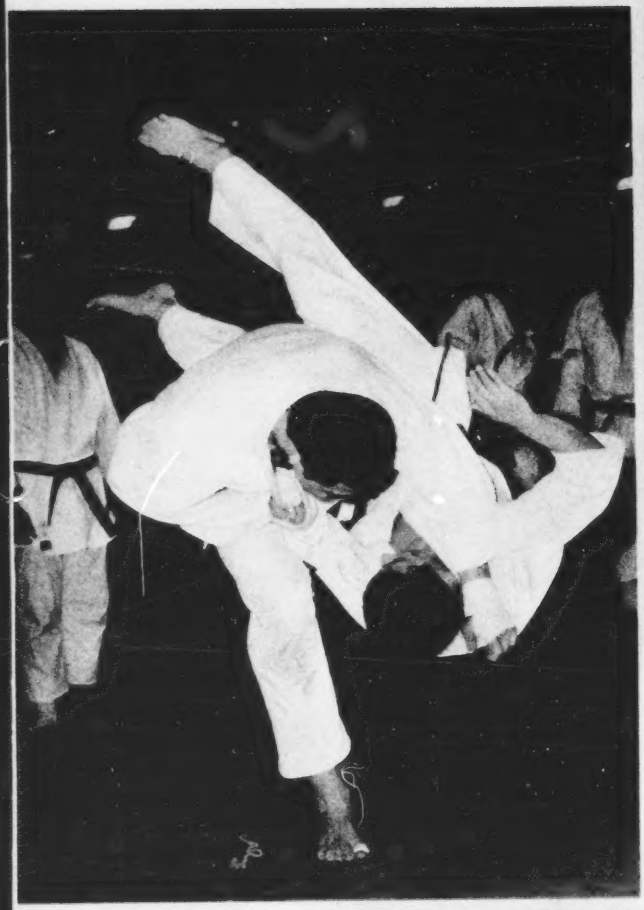
Japanese sportsmen have also established their mark in international contests in volleyball, table tennis, amateur wrestling, and gymnastics.

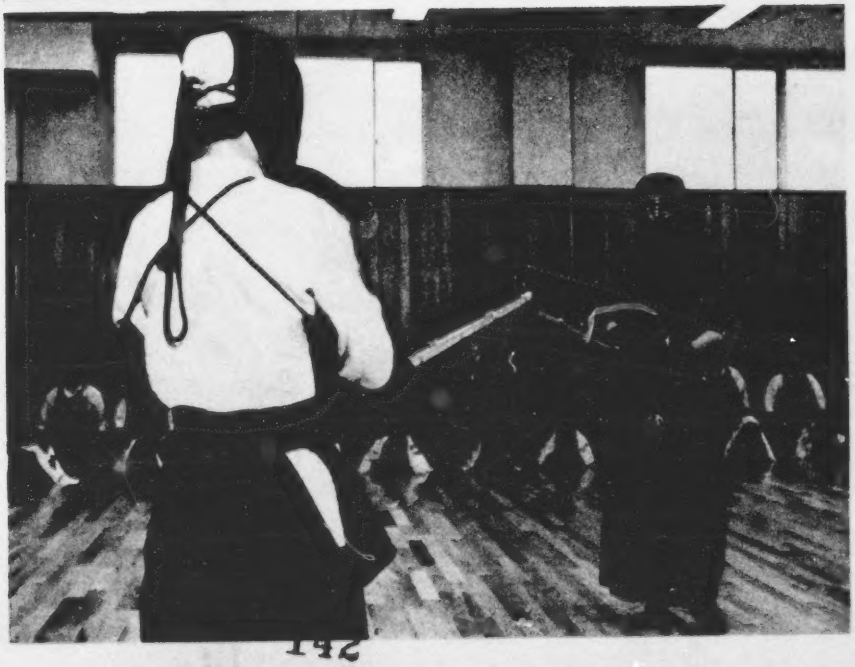
A National Sports Festival has been held every year since 1946 as an integrated meet of all the sports in Japan. The Festival is held in three parts, one meet each for the winter, summer, and autumn seasons, and is organized under Japan Amateur Sports Association.

The idea was first conceived among sportsmen in Tokyo to promote national physical culture and also to uplift the people's morale after the war, and the sports festival has been held in different prefectures in turn.

The competitions are on the basis of a prefecture as a unit and a prefecture with the best total results of its men and women

Traditional sports of Japan (clockwise): judo, sumo, and kendo. ⇨





athletes wins the Emperor's Cup, while the Empress' Cup is awarded to the prefecture with the best total results for women's events. More than 16,000 athletes from all over Japan take part in the National Sports Festival every year.

Many Japanese athletes have taken part in international sports meeting abroad, including the Olympic Games, and numerous foreign teams and individual athletes have been invited to Japan.

Japan first entered the modern Olympic Games with the Fifth Olympics in Stockholm in 1912 and was a regular participant through the 11th Games in Berlin in 1936. Wartime interrupted further participation until 1952 when Japan joined the 15th Games in Helsinki.

In 1964, Japan was host to the 18th Olympics in what was not only the first Olympics to be held in Asia, but was also one of the largest gatherings of world athletes since the Games in Helsinki, with 5,558 athletes from 94 countiries taking part in the Tokyo Games.

A total of 213 Japanese athletes took part in the 21st Olympic Games in Montreal in 1976. Japan won 25 medals in all (nine gold, six silver and ten bronze) to rank fifth in the number of gold medals after the Soviet Union, the German Democratic Republic, the United States, and the Federal Republic of Germany.

The 11th Olympic Winter Games were held at Sapporo, capital city of Hokkaido, Japan's northern island in 1972. A total of 1,655 athletes from 35 nations participated in the Sapporo Winter Games.

Japan is also a regular participant in other international championships, such as the Asian Games whose 3rd meet was held in Tokyo in 1958, and the Universiade which was also held in Tokyo in 1967. In terms of one-man sports competitions, Japan has long participated in international marathon championships. Three annual open marathon championships are held in Japan, one each in Fukuoka, Tokyo, and Beppu. Many top-class international competitors take part in these marathon races.

⇦ *(Top) A close play at the semi-annual high school baseball tournament, the biggest amateur sports event in Japan.*
(Below) A rugby match between a visiting foreign team and a Japanese one in Tokyo.

Acknowledgement is made for photographs to:
Jiro Futamura *(p.4)*, Jiji Gaho Sha,Inc. *(cranes, ptarmigans, p.8; Kyoto Festival, p.11; medical students, young visitors from Southeast Asia, p.33; all photos, p.34; laser, p.47; neighboring farmers, cow shed, pasture lands, p.53; fish farm, p.54; geothermal power plant, p.59; Yokohama Port, p.77; traffic control center, p.88; rehabilitation center, p.102; consulting doctor ambulance, p.107; video conference, p.123; noh stage, p.135; baseball, p.140)*, the Mainichi Newspapers *(fox, p.8; Nara, p.11; Diet in session, p.22; car checks,* p.48; *ticket counter, monorail, p.77; bank, p.83; office workers, p.87; water sampling, and testing, p.113; electron microscope, p.117; mobile library, p.123; book store, p.129; judo, p.139)*, Agency for Cultural Affairs *(mural painting, p.11)*, Suntory Museum of Art *(early European visitors, p.12)*, Yoshio Watanabe *(Katsura Imperial Villa, p.12)*, Tokyo Shoseki Library *(terakoya school, p.17)*, Imperial Household Agency *(top photo p.2)*, Nagoya City *(city office, municipal assembly, public hearing, p.27; technical school, p.48; cooking class; p.88; old people, baby, p.94, nurse and mother, homehelper, p.101)*, Defense Angeney *(p.39)*, Nippon Kokan K.K. *(factory, p.47; rolling mill, control center, p.60)*, Toyo Kogyo Co., Ltd. *(rotary engine, p.48)*, Iseki Agricultural Machinery Mfg. Co., Ltd. *(rice planter, p.53)*, Ministry of Agriculture, Forestry, and Fisheries *(forests, coastal fishing,* p.54; *recreational forest, p.113)*; Sharp Corp. *(four photos in center, p.65; assembly line, p.88; solar batteries & their application, p.118)*, Taisei Corp. *(Tohoku line, p.77)*, Osaka City *(Osaka, p.78)*, Japan Press Service *(employment office, p.87)*, Aichi Prefecture *(top photo, p.101)*, Ministry of Education *(energy laboratory, p.117; Antarctic survey, p.118)*, Japan Air Lines *(HSST, p.117)*, National Space Development Agency *(rocket, p.118)*, Japan Nuclear Ship Development Agency *(Mutsu, p.118)*, Meteorological Agency *(weather photo p.118)*, Nippon Telegraph & Telephone Public Corp. *("minifax," p.123)*, NHK *(symphony orchestra, p.130)*, Tokugawa Reimei-Kai Foundation (Tale of *Genji scroll, p.129)*, Kyodo News Service *(Kawabata, p.129; three smaller portraits, p.129)*, Yamatane Museum of Art *("Yoshino," p.130)*, Fumiaki Fukita *(Flower of Fire, p.130)*.Tokyo International Trade Fare Commission*(p.40)*.

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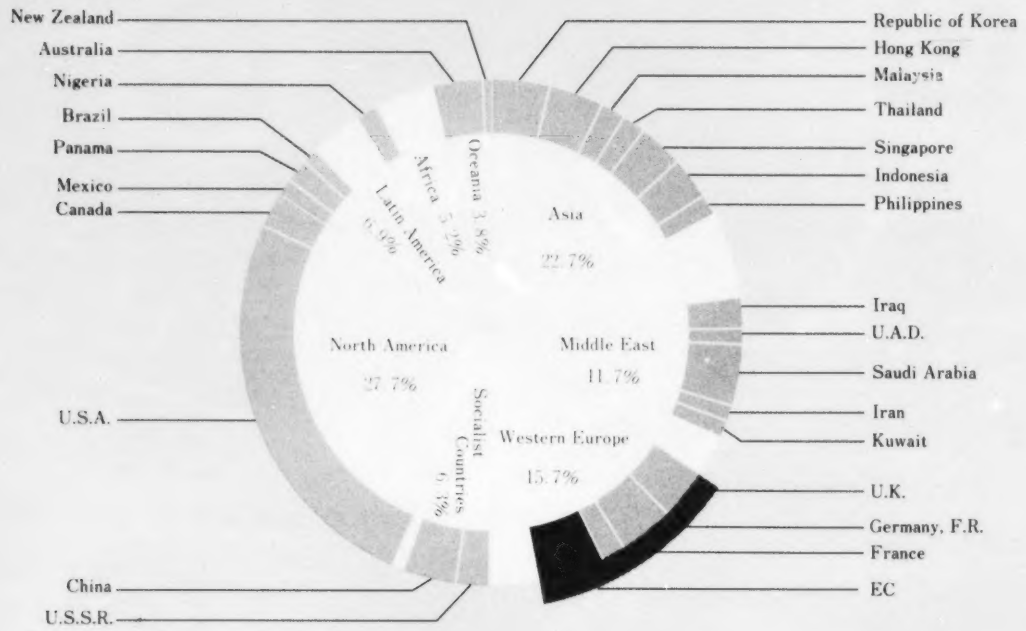
FOREIGN TRADE BY AR

●EXPORTS (U.S.$ 152,030 million)



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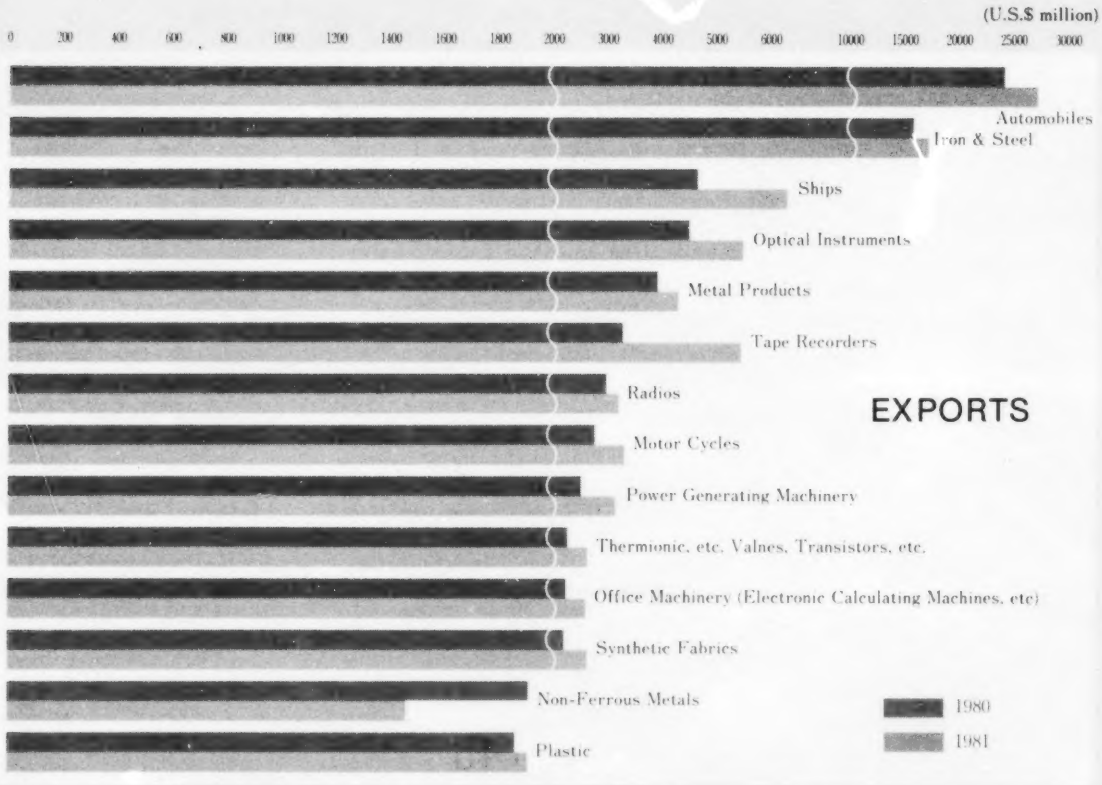
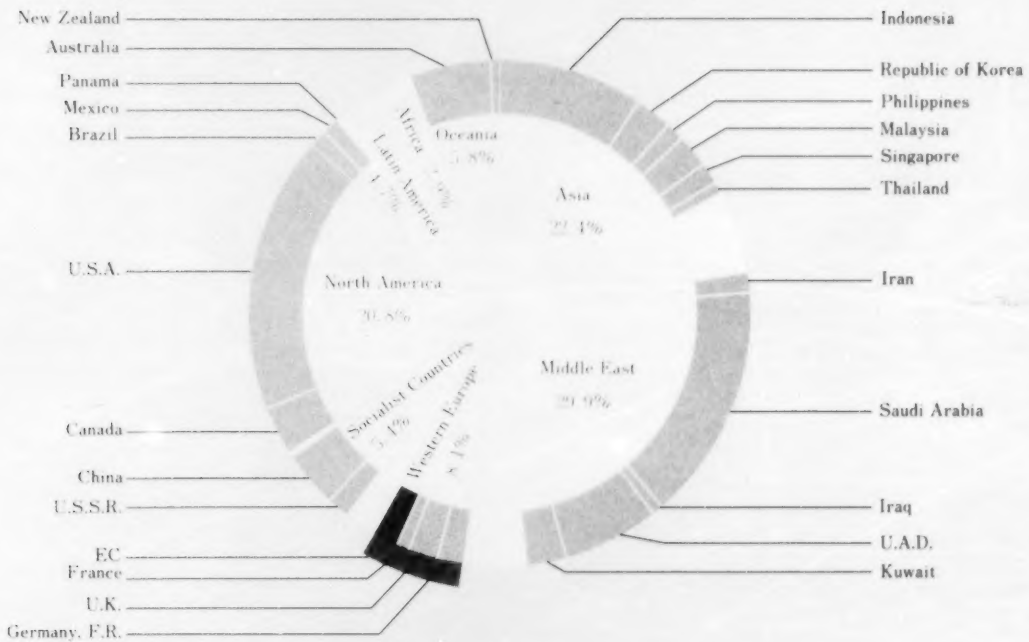
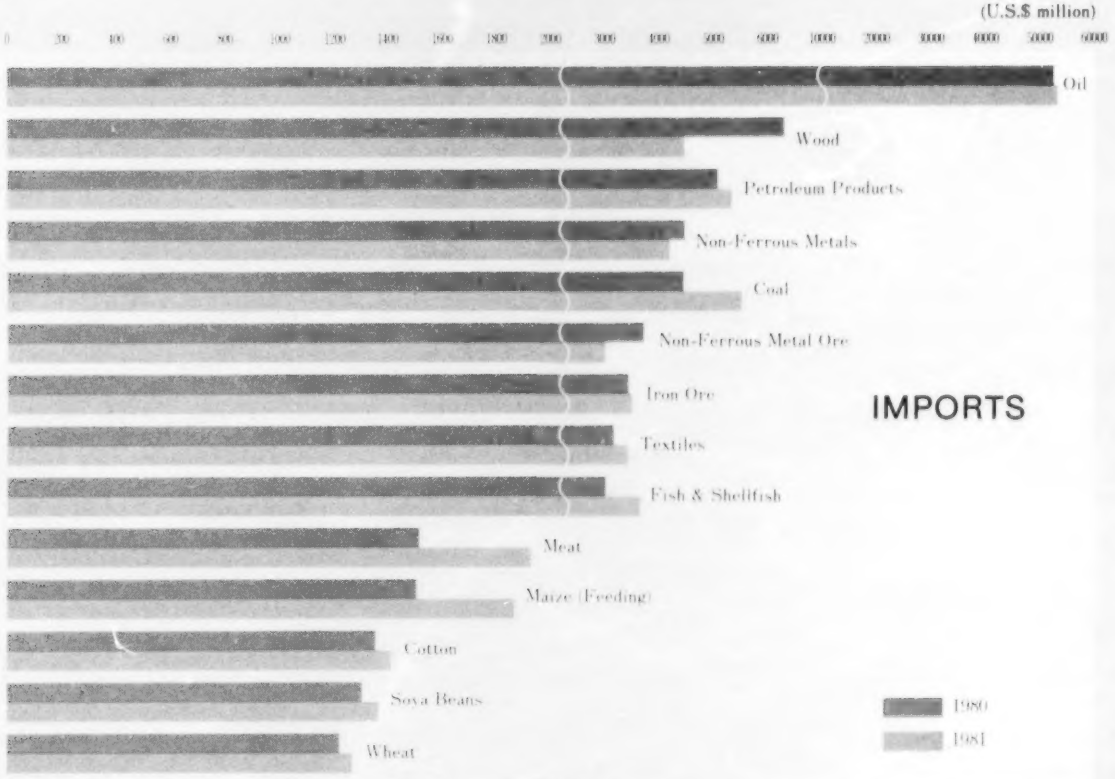


ŁAS AND COUNTRIES 1981

●IMPORTS (U.S.$ 143, 290 million)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